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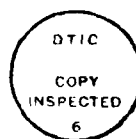
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Airpower in Transition: The Evolution of United States Tactical Air Doctrine, Tunisia, 1942-43, 148 pp. Mark J. Conversino, Capt, USAF, M.A., Indiana University, 1988.

Hampered by a lack of coordinated peacetime planning and hamstrung by an organization that broke air units up into "penny packets" responsible for narrow segments of the front, the United States Army Air Force roared into the North African theater in 1942 to meet with bitter defeat. This thesis traces the developments that led to a coherent and "co-equal" air command that removed tactical air units from a fragmented organizational structure dominated by ground officers.

Awestruck by the success of the German Luftwaffe in the early blitzkrieg campaigns, American leaders failed to recognize that Hitler's enemies were, in most cases, simply overwhelmed by the might of a rapid ground assault and their already outnumbered and largely obsolescent air forces deprived of a chance to rally. Thus, United States War Department planners envisaged the role of American tactical air power in much the same way as the Germans, as flying artillery. This study chronicles the course of air combat in Northwest Africa that by early

43 brought the Allied effort to the brink of disaster. Utilizing battle-tested British doctrine and theories, Allied and American air officers managed to forge an air force that swiftly destroyed its Axis opponents and played a vital role in securing victory on the ground. The changes thus brought about what many contemporary observers considered to be the first step toward an independent United States Air Force.



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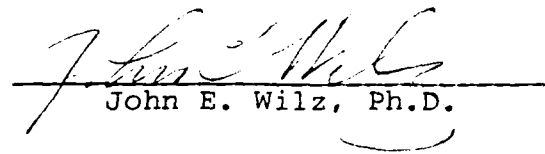
AIRPOWER IN TRANSITION:
THE EVOLUTION OF UNITED STATES TACTICAL AIR DOCTRINE
TUNISIA, 1942-43

Mark J. Conversino

Submitted to the faculty of the Graduate School
in partial fulfillment of the requirements
of the degree
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in the Department of History
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John E. Wilz, Ph.D.

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INTRODUCTION

In the view of most historians, combat in the North African theater in World War II conjures images of the daring Desert Fox, Germany's Field Marshal Erwin Rommel, as he led the legendary Afrika Korps to one victory after another in 1941-42. Or perhaps one thinks of a bloodied United States Army trying to recover its balance after the battle at Kasserine Pass in Tunisia in 1943. Few writers have paid much attention to a less spectacular but perhaps equally important development that took place in the later North African campaign: the slow but decisive change in the way the armed forces of the United States thought about and used tactical air power.

Aerial warfare in North Africa in general and air doctrine in particular have been largely overshadowed by the sweep of combat on the ground. Perhaps the very narrow appeal of studying any military doctrine has been responsible for this phenomenon. Still, the shift in American theories of air-ground combat during the North African campaign could hardly be overstated. To be sure, United States ground forces acquired valuable experience in North Africa. But the United States Army Air Forces not only gained experience in North Africa; they dramatically shifted the manner in which they endeavored to gain air superiority and support the forces on the ground.

After its involvement in the First World War in 1917-1918, the United States allowed its military forces to wither. Lacking any other modern combat experience, American military theorists and planners in their development of air support doctrine relied on the meager lessons gained in brief if bloody combat in the Great War. As the decade of the thirties unfolded and war broke out again in Europe, American planners drew upon the experiences of other nations, and attempted to mold those experiences into a doctrine and philosophy for their own air arm.

In 1939-40, as the rest of the world looked on with awe and horror, the rebuilt armed forces of Adolf Hitler's Germany embarked on a succession of campaigns that resulted in near-total dominance of the European continent by the Third Reich. As the German air force, the Luftwaffe, blasted all before it, the German Army subjected its victims to the brutal art of lightning warfare, or "blitzkrieg." Already persuaded that the proper role of an air force was to be at the disposal of the land army and its commanders, American military observers of German military triumphs pointed to the role played by the Luftwaffe in the blitzkrieg campaigns as proof that their own theories regarding the role of air power in modern warfare were correct.

The purpose of this paper is to show that, despite the many years involved in developing the theory of an air force subordinate to the ground force, the tactical or air-ground aerial doctrines with which the United States Army Air Forces entered combat were seriously flawed. To this

purpose, I will describe in brief the larger controversy that surrounded the question of autonomy for the American air arm through the interwar period. Such a description will illustrate the attitudes with which most American military men outside the air arm regarded the use of the air weapon. Those attitudes, while essentially valid given the technological backwardness of most aircraft in the decades of the 1920s and 1930s, led directly to the formation of the doctrine that was to prove totally inadequate on the field of battle in 1942-1943.

German air doctrine as practiced in the blitzkriegs will also be examined to determine its effects on both the Luftwaffe and the United States War Department. Here is a critical part of the story. Obviously air power alone could not win the Second World War. I do not contend that had the United States not changed its air doctrine Nazi Germany, faced with so many unfavorable factors, would have emerged victorious. I believe it reasonable to assume, however, that the United States would have suffered far greater losses both in the air and on the ground as a result of a prolonged reliance on faulty doctrine.

The British, too, were key players in the drama that resulted in a switch of American thinking about air power. The British had had their own problems in developing successful aerial combat techniques and doctrines, but were able to present to American commanders in Tunisia a combat-tested formula for success. Consequently, this paper will examine briefly the experiences of the British in the desert

campaigns against the German Afrika Korps that helped mold British aerial doctrine and philosophy.

I will place all of this in a rough chronological framework, leaving that structure periodically to consider the more important issues that do not fit neatly onto a time line. I will describe in some detail the record of American air combat that led to the fateful reorganization and command shake-up of mid-February, 1943. I will then contrast the course of aerial combat after the inauguration of the new system with the previous course. The course of air combat will, of necessity, also be cast against a rough summary of ground combat, since the idea of tactical air support would make any other treatment of the subject rather disjointed.

Allied landings in Northwest Africa in November 1942, codenamed TORCH, provided the Allies in general and the Americans in particular with an opportunity to revise tactics and doctrines and thus produce theories of combined arms warfare that in future campaigns in Europe would subject the Germans to the same kind of punishing blitzkrieg that they themselves had once used with such success.

The battles fought in the air over Tunisia in 1942-43 represented a clash three doctrines: British, German, and American. Finding their doctrine wanting, the Americans, with the help of their British allies, were sufficiently flexible to accept the indisputable results of combat and to restructure their thinking and their doctrine. I caution the reader to bear in mind that this restructuring applied only

to the art of tactical air warfare, as opposed to strategic bombardment. The former concentrates on the enemy's air force and the battlefield as well as objectives whose value is more immediate to the forces on the ground. The strategic bombing of Nazi Germany, around which so much debate continues to center, involved the entire national structure of the enemy, and though alluded to in the paper falls outside its scope. In any event, the willingness of the American military to adjust its theories helped speed victory and limit losses. A lack of willingness to make a similar adjustment on the part of the Germans ensure their defeat in the air.

CHAPTER I

THE DEVELOPMENT OF AMERICAN AIR DOCTRINE

1919-1941

In 1939, with war breaking out in Europe, the United States Army Air Corps had very little in the way of equipment and almost no modern aircraft. With the important exception of the Boeing B-17 bomber, it had in its inventory no aircraft type equal to the best of the British or the Germans. Since the end of the First World War, niggardly appropriations by Congress hampered aeronautical research. Of equal if not greater importance was the lack of agreement within the War Department as to the mission of the Air Corps. This lack produced an almost numbing confusion that¹ effectively prevented any long-range planning.

The main obstacle to the establishment of an Air Corps mission or doctrine lay in the struggle between ground and air commanders for operational control over aerial components. The enthusiasm with which proponents of the independent use of air power pressed their views disturbed both Army generals and Navy admirals. Those proponents called attention to General William "Billy" Mitchell's famous bombing tests of 1921. Using three captured German warships, including the heavily compartmentalized Ostfriesland, Mitchell demonstrated that aircraft armed with

bombs were capable of sinking ships once considered "unsinkable." In September, 1921, Mitchell repeated his performance by sinking the obsolete United States battleship Alabama, while two years later his airmen sank the Virginia and New Jersey.² The Navy was quick to point out that the ships were immobile and not resisting, but notwithstanding Mitchell's grandiose claims that air power had made surface ships "obsolete", the tests foreshadowed a radical change in naval warfare. In the Second World War, entire naval engagements such as those fought at Coral Sea and Midway took place entirely in the air, the surface ships never even catching a glimpse of one another. Japanese aircraft sank the British battleships Prince of Wales and Repulse in 1941, while four years later Japan's mightiest ship, the Yamato, succumbed to an American aerial attack. These were but a few examples of how aircraft altered naval combat.

The early struggle for recognition of the potential of air power was dominated by Mitchell. The military leaders of post-World War I America were interested primarily in national defense. According to Mitchell, the airplane was essentially an offensive weapon. He also pointed out, correctly as events were to prove, that "the only defense against an air force is another air force." Mitchell not only challenged the primacy of the Navy in the defense of the country; he presaged an age of intensive aerial warfare when he wrote of attacks on civilians, factories, and cities.³ The spectacular rhetoric of Mitchell's warnings and his often tactless expression of those warnings caused the

inherent merit of his predictions to be ignored by military and civilian leaders alike.

At the center of the entire controversy over air power's proper role was the organizational structure of the United States armed forces. Airmen argued that an independent air force could best serve the needs of the country. As long as the air arm remained under the control of ground officers, the airmen maintained that the Air Corps would never become more than flying artillery. Still, Field Service Regulations, U.S. Army, 2 November, 1923, reflected America's combat experience in the Great War when it stated that the "coordinating principle which underlies the employment of the combined arms is that the mission of the infantry is the general mission of the entire force. The special missions of the other arms are derived from their powers to contribute to the execution of the infantry mission."⁴

The debate over air power did not rage in the military alone. Congress convened numerous boards and hearing during the interwar years to investigate the desirability and feasibility of a coequal, independent air force, as well as a total War Department reorganization. Proponents of this reorganization envisaged a Department of National Defense with coequal land, air, and naval force. As early as 1919, the Chief of the Air Service, Brigadier General Benjamin Foulois, testified before Congress that the Army General Staff, "either through lack of practical knowledge, or deliberate intention to subordinate the Air Service to the

needs of the other combat arms...has utterly failed to appreciate the full military value of this military weapon⁵ and...accord it its just place in our military family."

In its stand against an independent and coequal air force, the War Department received the support of each chief executive of the 1920s, the military and naval affairs committees in Congress, and most general officers of the Army and Navy. In 1925, Secretary of the Navy Curtis D. Wilbur stated that "I think there is not a man in either service, outside of those connected with the aircraft...who would regard the Air Service as a principal⁶ service." As late as 1926, an official poll taken for a congressional committee showed 101 members of the General Staff opposed to a Department of National Defense; only⁷ favored the move.

Both Congress and the War Department realized that a need to address the issue of air power itself existed. The result was the Air Corps Act of 1926. Based on the findings of a congressional board, the act produced no real change. The air arm's name was changed from the Air Service to the Air Corps, and the provisions of the act established an air division in each section of the General Staff. The act provided for a new Assistant Secretary for War to help in fostering "military aeronautics." The act mandated minor actions to address complaints among airmen regarding pay and promotion and authorized an Air Corps strength of 1518 officers, 2500 flying cadets, 16,000 enlisted men, and 1800 aircraft. Congressional resistance toward more autonomy for

the air arm persisted. Between 1926 and 1935, various proponents of an independent air arm and a new defense structure presented in Congress twelve bills for a Department of Aeronautics and seven for a single Department of National Defense. Congressional committees reported⁸ unfavorably on all of these proposals.

The degree of autonomy for the Air Corps in the 1920s and 1930s seemed tied to the technological development of aircraft. This was reflected in Training Regulation 440-15, Fundamental Principles of Employment of the Air Service, 26 January, 1926. The organization and training of air units was to be based "on the fundamental doctrine that their mission is to aid the ground forces gain decisive success."⁹ Given the performance capabilities of existing aircraft at that time, most Army leaders thought there was little else of real importance for an air force to do. Airmen, of course, disagreed.

The Air Corps did write its own manuals, but had to make them palatable to ground officers who were in overall command. The textbooks in use at the Air Service Tactical School at Langley Field, Virginia, in 1926 approached situations from the standpoint of various ground situations. Even the textbook The Air Force, published in 1931, while emphasizing that in the future air power would play a decisive role in war, conceded that "the next war will begin where the last ended, and the air force will be subordinate, although a most important auxiliary, to the ground forces."¹⁰

Typical of Congressional and War Department theories on

the use of air power and the Air Corps' place in the organizational structure of the military was the report of the Baker Board,¹¹ released in July 1934. Regarding an independent air force as well as a single Department of National Defense, the board concluded that "the five Secretaries of War who have occupied that office during and since the World War have each expressed... opposition to separating air forces from the army."¹²

The report scoffed at the contention that the United States was vulnerable to air attack. To support its point, the report cited the elaborate preparations that were required for Italy's General Italo Balbo to lead a formation of Italian aircraft across the Atlantic. The flight, the report stated, required the establishment of eight air bases in foreign countries, the use of the weather services of four nations, and advance preparations that began in May 1933 for a flight commencing on July 1. The committee was transparently correct, given existing aircraft, in stating that "[t]he foregoing indicates the vital importance of bases in all operations, and, under present air developments, shows the fallacy of claims to the effect that the U.S. is exposed to serious air attacks from land-based air forces..."¹³

The Baker Board's report concluded that air attacks against the United States could only be launched from bases seized in the Western Hemisphere. Since the ground forces were thus responsible for hemispheric defense, the Air Corps was to continue to act in its supporting role of repelling a

seaborne invasion carried out by an enemy with presumably little air support. "After all," the report concluded, "the members of the Air Corps are primarily soldiers in the Army of the United States... . The committee, in this report, has striven earnestly to emphasize the higher ground of patriotic service and common interest upon which the whole Army can cooperate with sympathy and effectiveness."¹⁴

The report openly opposed a separate air force. It stated further that "[s]eparating the Army Air Corps into a body independent of this [General Staff] control and cooperation can only lead to failure resulting from [a] lack of common objective, confusion, and cross purposes."¹⁵ The report did concede that "early aerial supremacy will be an important factor [in the next war]. This involves many factors but primarily a superior supply of efficient airplanes and of all accessories."¹⁶ The board appeared to have little faith in combined staff planning and coordination, and seemed to suggest that an independent air force would fight a war all on its own, without any regard for the overall effort of the nation's armed forces. And, as we shall see, the "superior supply" of airplanes and accessories in which the board placed so much faith was not to be at the disposal of the American forces in the early months of the Northwest African campaign.

To make matters worse from the perspective of the Air Corps, the Joint Board of the Army and Navy in 1934 stated that the military air arm could not be given missions independent of the ground forces because of the "Army Air

Corps is primarily intended and organized for employment as an integral part of the Army."¹⁷

Many Air Corps officers by 1933 thought it hopeless to continue striving for complete independence from the Army. As a more limited objective, they decided to push for the adoption of a General Headquarters (GHQ) Air Force. Such a reorganization would at least assure the concentration of offensive aviation under a central command and provide it with a more or less independent mission.¹⁸

Meanwhile, in 1933, opinion in the War Department had also moved more toward acceptance of the idea of a GHQ Air Force. Headed by Major General Hugh A. Drum, the Drum Board reviewed both War Department and Air Corps studies, and recommended establishment of a GHQ Air Force under the Chief of Staff that would contain 1800 aircraft. The next year, 1934, the Baker Board also recommended establishment of a GHQ Air Force. This reorganization finally went into effect on March 1, 1935.¹⁹

The establishment of the GHQ Air Force called for a reformulation of doctrine, and discussion within the War Department in the mid-1930s now assumed a different tone concerning the mission of the Air Corps. While both the Drum and Baker boards denied the possibility of an air attack on the country, they did allow that GHQ aviation would prove a valuable adjunct to coast defense. Thus, the Air Corps mission began to take shape with two main responsibilities, though neither seemed to satisfy the more offensive-minded

airmen within its ranks. These tasks, however, would center on coastal or hemispheric defense and, as always, close support of the ground forces.²⁰

Within the Air Corps itself, meanwhile, two distinct points of view concerning doctrine developed. One attitude was more politically oriented, and stressed the defensive mission of aviation, but as an interim rather than a long term policy. An Air Corps Board study presented on October 29, 1936, was representative of this attitude. "The Functions of the Army Air Forces" assumed that, with current aircraft performance, sustained air attacks could not be carried out against any major foreign power from bases in the United States or any of its territories. The report of the board declared that the Air Corps should be immediately and primarily concerned with national defense and the "preservation of internal order." Until an adequate defense was assured, "the diversion of effort incident to preparations for strategically offensive operations is not justified."²¹

Critical to the development of air doctrine during the hectic years of 1939-1941 was an Air Corps board study entitled "Air Corps Mission Under the Monroe Doctrine," October 17, 1938. The primary role of aviation was conceived as defense against hostile efforts to operate from air bases established in this hemisphere. This concept subordinated both anti-shipping and offensive strategic strikes to purely defensive counter-air measures.²²

The other attitude was more aggressive and found its chief exponents at the Air Corps Tactical School at Maxwell Field, Alabama. (The school had moved from Langley in 1931.) The school's curricula stressed the transitory nature of defensive operations. A study on proposed doctrine, published in 1935, stated that the all-important mission of air power "when its equipment permits, is the attack of those vital objectives in a nation's economic structure which will tend to paralyze that nation's ability to wage war." That theme, from 1935 onward, was repeated time and time again in lectures at the school. The special mission of the air arm was the devastation of the whole of the enemy's "national structure."²³ Thus, the Air Corps itself was split primarily between two factions; one stressed a rather defensive posture in defense of the coast while another aspired to lay waste an enemy's entire country. Neither attitude helped the Air Corps determine a properly balanced doctrine of close support in which the battle for air supremacy would be waged while providing support to the ground forces.

The Air Corps was not devoid of those who endorsed the air arm's subordinate role. Underscoring this attitude, Air Corps Colonel B.Q. Jones delivered to the Army War College in 1936 a lecture entitled Military Aviation. Jones repeated the War Department view that the primary mission of the air forces was to operate as an "arm of the mobile army in support of land operations and defense of the coast."²⁴ He stressed that attack aviation was totally subordinate to the

ground forces. Its role was determined "by the direct contribution it can make to the success of the operations of the ground forces."²⁵ As we have seen, Colonel Jones would have probably found little support within the Air Corps for such a view. While Air Corps officers did not deny the importance of close support operations, most still believed that the air arm deserved and was capable of carrying out missions independent of the ground forces.

Despite the infighting and confusion that continued over the role and mission of the Air corps, President Franklin D. Roosevelt by January 1939 was sufficiently alarmed by the growing possibility of war in Europe to call for a large-scale expansion of the air arm. The aerial force in existence at that time consisted of approximately 1700 combat and training aircraft, 1600 officers, and 18,000 enlisted men. Described as "utterly inadequate" by the President, the force was authorized by Congress in the spring of 1939 to expand to 5500 aircraft, 3203 officers,²⁶ and 45,000 enlisted men.

War at length came to Europe when Germany invaded Poland in September 1939. Overawed by the spectacular successes of the German war machine through the summer of 1940, the Army's General Staff decided the "the Air Corps believes its primary purpose is to defeat the enemy air force and execute independent missions... . Actually, its primary purpose is to assist the ground force."²⁷ Indeed, a proposal made by Major General Henry H. Arnold, Deputy Chief of Staff for Air, that called for a separate air staff, a

unified air arm, and an air force that was coequal in terms of command with the ground and service commands was, like similar proposals in the past, rejected by the War 28 Department in October 1940.

By March 1941, both Secretary of War Henry L. Stimson and Army Chief of Staff General George C. Marshall realized that coordination among staff officers on air matters was not an appropriate substitute for unity of command. Stimson directed that action be taken to place the air arm under a single commander.²⁹ Marshall implemented a directive calling for the Deputy for Air, General Arnold, to coordinate all air matters and develop an organization staffed and equipped to provided the ground forces with essential aircraft units for joint operations. "Air autonomy in the degree needed", a single command for the air arm, was to be formed.³⁰ The long vacant office of Assistant Secretary of War for Air was filled by Robert J. Lovett, who directed his energies toward promoting aircraft production and streamlining the organization of the Army air arm. The resultant reorganization established the Army Air Forces (AAF), effective June 20, 1941, with Army Regulation 95-5. The United States Army Air Forces were superior in the command structure to both the Air Corps and the Air Force Combat Command which had recently replaced the GHQ Air Force.³¹

Air Support Sections representing the Air Force Combat Command were made responsible, under the new organization,

for the supervision of cooperative air-ground training and for the development of air-ground (or tactical) doctrine. Still, the years of confusion and controversy combined with a lack of combat experience prevented the emergence of any clear close support doctrine. A doctrinal manual was indeed published by the Army Air Forces in 1941. Unfortunately, no one knew how an air support command was to support an army or even what its composition should be. Large scale maneuvers in 1940 and 1941 were carried out by the Army in an attempt to gain experience in combined arms combat such as that used by Germany. For its part, the air arm employed attack units to provide close support for the mock combatants. These training exercises could not provide enough experience to either the land or air units involved to bring them up to the operating level of the German army. In the Louisiana maneuvers shortly before America's entry into the war, air units attempted to emulate the German Luftwaffe's blitzkrieg style. Training and equipment deficiencies abounded, though valuable experience was gained by a handful of airmen. A War Department letter dated October 7, 1941, on the subject of air-ground cooperation did nothing to clarify matters when it stated somewhat simplistically that an air support command "may be attached to an army or armed force upon entry into a Theater of Operations or as directed by the theater commander."³²

Such, then, was the state of American doctrinal thinking regarding tactical air power on the eve of Pearl

Harbor. The final statement on doctrine which was to guide the actions of American tactical units in their initial engagements in Africa was laid down in War Department Field Manual 31-35 Aviation in Support of Ground Force, 9 April, 1941. A key sentence from that document was to become the focal point of future controversy and debate surrounding the proper role of tactical air power. Field Manual 31-35 stated that "the most important target...will usually be that target which constitutes the most serious threat to the operations of the supported ground force." ³³ While one may interpret this to mean that an enemy air force could be that "most serious threat," as we shall see, the manner in which the ground commanders dealt with that threat was vastly different from the way in which airmen wished to confront it. In solving the problem of gaining air superiority and providing ground support as well as numerous other functions, the ground and air commanders would be forced to reckon with an aggressive and well-armed foe. In finding that solution, the military principles of concentration, unity of command, and positive purpose would be reexamined by the commanders in the field.

Thus, we have seen an air arm develop that was tasked primarily with defensive operations against a hostile invasion of North America. Virtually all discussions of the role of tactical air power centered on the defensive role that tactical units would play. Immune from air attack, the United States succumbed to the assumption that war would not

(and, indeed did not) reach its shores. Throughout the interwar years, aircraft design lagged behind those of the other powers. Even in its role of coastal defense, the air arm was woefully underequipped. The aircraft upon which the Army Air Force would soon depend were, in many cases, only reaching the production stage as late as 1940. Production of the P-38 and P-40 fighter aircraft and A-20 light bomber all began in 1940. Failing to provide its air forces with sufficient numbers of modern aircraft and indoctrinating these forces in a defensive role, the United States War Department was merely exhibiting the signs of an isolationist mindset that pervaded the nation's thinking throughout the decades of the 1920s and 1930s. Little thought was given by military planners to developing doctrines of combined air-ground combat on foreign battlefields against a well armed and numerous air force.

United States tactical doctrine as it existed in the months prior to American involvement in the war nonetheless derived some inspiration from another source. From the detached standpoint of contemporary military observers and subsequent historians, the German campaigns of 1939-1941, known collectively as blitzkrieg campaigns, provided many lessons regarding modern warfare. Leaders within the American military establishment were awestruck by the incredible swiftness with which Germany shattered the forces of its opponents. The Luftwaffe played a crucial role in this new form of combined-arms warfare. But it was success

itself that masked to friend and foe alike the serious weaknesses in Germany's use of its powerful air force.

The striking success of the German attack against its first victim, Poland, was not lost on American observers. A lecture prepared for delivery to the First Class, Corps of Cadets, at West Point in February 1941 began with a rather melodramatic opening that reflected the deep impression that the operations of the Luftwaffe had made on many American military men. Referring to air operations in the blitzkrieg on Poland, the speaker began his lecture: "Gentlemen, we are gathered here tonight to hear and consider the outstanding modern historical example of the proper use of air forces in support of ground arms."³⁴

The War Department also looked to the Polish campaign as a prime example of how an air force should conduct its operations in wartime. "By employing its full striking power at the very beginning," a War Department report stated, "...the German air force gained the necessary freedom of action to operate unmolested in all parts of the country... . Within four days Poland's industries, particularly her aviation plants and her pilot training schools had felt the full fury of [the] German air assault...and thereafter [Poland] was compelled to fight blind."³⁵

Though it was not apparent to observers at the time, Germany's success in the air over Poland was not a result of a sound doctrine alone. Often situation, not doctrine,

dictated the use of German aircraft.³⁶ Indeed, the action did follow standard blitzkrieg doctrine in that the Luftwaffe launched an initial crushing assault against the Polish air force, including its support facilities. In so doing, the Luftwaffe gained air superiority at a very early stage. The German air force, like the rest of the German armed forces, thought only in terms of blitzkrieg. Under this theory, the Luftwaffe engaged in the elimination, stage by stage, of each and every obstacle which might frustrate³⁷ the freedom of movement of the ground forces. The fact that the Polish air force flew largely obsolescent aircraft³⁸ helped ensure early German success. The rapidly advancing armored columns also overran airfields, industrial centers, and together with the Soviet forces moving in from the east, literally eliminated any areas from which the Polish air force could hope to stage a recovery. This was a classic example of blitzkrieg warfare, the first of a series of isolated campaigns where German air supremacy would remain unchallenged. Much later, when the enemy was not so inferior, so utterly isolated and without resources, and retained the means and the will to resist, the aerial support doctrine that evolved in the early blitzkriegs would prove³⁹ seriously flawed.

Germany's success in the West in 1940 began what was to become a permanent shift in the emphasis of German air doctrine to support of the army, to the detriment of indirect strategic support or prolonged counter-air

operations. The Luftwaffe had hitherto experienced only a foretaste of effective fighter opposition over Dunkirk when for the first time German pilots, flying Messerschmitts and Heinkels, faced considerable numbers of British Hurricanes and Spitfires.

Indeed, the Luftwaffe had not yet faced in full-dress combat an enemy having equal or superior equipment and whose national structure was not being overrun by a massive ground assault. For the Germans, the fight for air superiority hitherto appeared to be a relatively short affair, a sharp destructive campaign that did not require constant and repeated efforts. In the British, the Germans faced a shaken but determined enemy whose homeland remained untouched and whose air force remained unbeaten. In the summer of 1940 the world, including the now shocked and dismayed people of the United States, awaited the outcome of the approaching struggle.

To invade Great Britain, the German Army had to cross the English Channel, a body of water little more than twenty miles wide at its narrowest point. For such an invasion to be successful, Germany would need total air superiority to prevent both the Royal Air Force or the British Home Fleet from smashing an invasion force in the Channel. Once ashore, the Germans would apply the well-tested formula of the blitzkrieg. The Luftwaffe, therefore, was tasked with its usual role of annihilating the enemy air force and providing powerful direct support of the ground forces. The Germans viewed the invasion as an enormous river crossing

with the Luftwaffe providing, in effect, a massive,
⁴¹
concentrated, artillery barrage.

The Luftwaffe's aims were to eliminate the RAF by day and night attacks against its ground installations as well as British aircraft industry. The Germans allotted four days for the destruction of RAF Fighter Command in the south while the entire Royal Air Force was to be crushed within
⁴²
four weeks. The Luftwaffe failed in its drive to destroy the RAF. For the first weeks of the Battle of Britain in late summer and early autumn, 1940, the Luftwaffe concentrated almost exclusively on the RAF and related targets such as aircraft plants, airfields, and radar sites. Then, when a formation of German bombers dropped its bombs on London instead of its assigned target, the British
⁴³
responded with its own, ineffective raid on Berlin.

Hitler responded in a typical manner and ordered his Luftwaffe to embark on a campaign for which it lacked the doctrine, equipment, and training: a strategic campaign
⁴⁴
against Britain's cities. Then, as now, a true strategic assault, if it was to be effective, required more than simply unloading bombs over urban areas. Planning and staff work lacked coherence, and the entire assault degenerated into nothing more than a frustrated campaign of vengeance. Though the Luftwaffe could act quite independently and with devastating results, such as the raid on Coventry in November 1940, in its first mission independent of the Wehrmacht it proved incapable of achieving its goals. The doctrine of

short, sharp attacks with medium twin-engine bombers and single-engine dive bombers had proved to be totally sound over Poland and France. In the face of a determined enemy who was not under simultaneous ground assault, the Luftwaffe lacked the equipment and long-term planning necessary to act on its own to achieve air superiority.⁴⁵

The Luftwaffe would go on to achieve success on an unprecedented scale in the opening months of the attack on the Soviet Union in 1941. But the Luftwaffe was not expected to conduct a long, independent air war. Its leaders and planners thought in terms of short-term, short-range warfare, namely, the blitzkrieg. The Luftwaffe's "strategic" attacks on the enemy's air force or its support facilities were merely the prelude for an army follow-up.⁴⁶ As long as Germany was victorious on the ground, its air doctrine proved to be a self-fulfilling prophecy. Once in retreat, however, the need to provide the hard-pressed forces on the ground with air support further sapped German air strength until the combined demands of a multi-front war for which it was not equipped brought the Luftwaffe to its knees.

As American and British forces waded ashore in Northwest Africa in the TORCH landings of 1942, they faced in both the German Army and the Luftwaffe an enemy that still possessed the power and the resources to mount a fierce struggle. If well equipped, the Allies at this point did not yet possess the overwhelming material advantages over the Germans that they would enjoy in later campaigns.

For the first time, United States forces were about to engage the European Axis powers in land combat. Now, the United States Army Air Forces would get the chance to test their doctrines of tactical support, doctrines which owed much to the German experience. And as of November 1942, there was little in that experience to cause one to doubt either German or American doctrines of tactical air support.

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CHAPTER II

AUTUMN COMBAT: AIR COMBAT IN THE RACE FOR TUNIS

The Twelfth Air Force was activated at Bolling Field, Washington, D.C., to control U.S.A.A.F. units destined for the TORCH landings in Northwest Africa. Transferred to England on September 12, 1942, the Twelfth passed under the command of Major General James H. Doolittle on the 23rd of that month. Under the outline plans for TORCH the R.A.F. Eastern Air Command would support the Eastern Task Force, covering Algiers and the convoy routes east of Cap Tenes. The Western Air Command, that is, the Twelfth Air Force, was assigned to cover Oran and Casablanca as well as the convoy routes from Gibraltar to Cap Tenes. Twelfth Air Force units, including B-17 heavy bombers, would also be used to help halt any Spanish or German moves from Spanish Morocco¹ against the Allied flank.

The Twelfth drew its resources from those of the Eighth Air Force in England between September 14 and October 16, 1942. Altogether, fourteen units, half of the strength of the Eighth, were assigned to the Twelfth. These units included the 97th and 301st Heavy Bomb Groups; the 1st, 14th, and 82nd Fighter Groups (P-38s); the 31st and 52nd Fighter Groups (Spitfires); and the 81st Fighter Group (P-

39s). Seven of these units had experienced combat with the Eighth; the 97th bomb Group had flown fifteen missions, including the first Eighth Air Force B-17 raids on Europe.²

The United States and British air commands initially remained separated along national lines-and according to tasks and areas of responsibility. Their respective operations corresponded in general to the projected division of the ground forces into the United States Fifth Army and the British First Army. Allied Force Headquarters (AFHQ) was to be responsible for coordinating planning for air operations through an assistant and deputy assistant chief of staff for air on Lieutenant General Dwight D. Eisenhower's staff. The assigned strength of Doolittle's Twelfth Air Force was three times larger than the British air contingent, 1244 aircraft to 454.³ On paper at least, this represented a powerful force.

Once ashore in North Africa, the air commanders would provide the required air support to their respective ground forces. The XII Air Support Command (ASC) would support United States ground operations. Unfortunately, Major General Carl A. "Tooeey" Spaatz, as Eisenhower's air adviser as of December 1, 1942, was not completely certain as to the role of the Twelfth Air Force following the assault phase. Spaatz remarked to Doolittle on October 30, 1942, that he never understood the "What, When, and Where" the Twelfth was to do. The Twelfth was to operate at the direction of the

ground commanders in the assault phase; Doolittle was to establish his headquarters at Oran, in Algeria, and then await Eisenhower's directive for the further employment of the Twelfth.⁴

It was quite certain, however, that in November 1942 United States tactical air power was to be employed in North Africa under the provisions of FM 31-35. In combat, Spaatz's questions of "what, when, and where" would be answered by the directions of ground commanders. No apparatus existed to allow the centralized command of aircraft; the aircraft of the Twelfth stood to be parceled out as support detachments for the various ground units. The commanders of these ground units would, in accordance with FM 31-35, exercise final⁵ authority over the employment of these aircraft.

The Allied air forces faced a very uncertain task indeed. Once ashore, they would face the problem of an inadequate system of airfields. TORCH's planners hoped that the airfields around Tunis and Bizerta would fall to Allied ground forces before the onset of the winter rains. Four engineer battalions were tasked under the TORCH directive to provide additional airstrips. Unfortunately, these engineers, as well as the air forces they were to support, would be hampered by what supplies couldn't be brought in the early convoys and unloaded at possibly damaged ports. These supplies, including the construction machinery needed to build adequate airstrips, would then have to travel over⁶ marginal road and rail facilities.

Thus, for the Allied air forces, the seizure of a handful of all-weather airfields in French North Africa and Tunisia was of vital importance if they were to establish themselves quickly. Quite simply, an all-weather field consisted of a paved runway that allowed aircraft to take off and land regardless of the condition of the surrounding terrain. The bigger fields near Tunis also boasted paved taxi and parking areas that allowed aircraft to "scramble" quickly. More will be said concerning airfields below. It is important to note here, however, that if the French troops resisted and prevented the Allies from gaining access to these airfields, the Allied aerial effort in support of the drive eastward, not to mention the fight against the Axis air forces, would be severely hampered. In this atmosphere of doubt, the Twelfth developed two plans: a "peace" plan and a "war" plan. The plan that was to be used would depend on whether or not the French appeared determined to resist. On D-day minus one, Eisenhower would choose the plan.⁷

As Allied convoys steamed through the strait of Gibraltar, the Germans predicted that their ultimate destination was Malta or perhaps a landing in the eastern Mediterranean to help crush Rommel's army which was then in retreat. In Rome, however, the Italian High Command, the Comando Supremo, correctly interpreted Allied intentions. Typically nervous about the conduct of the war they had stumbled into in 1940, the Italians calculated that their

country was the ultimate objective of this Allied move. In the view of the Germans, the Mediterranean theater still represented a minor diversion in which a setback would prove neither decisive nor irreversible. From the Italian perspective, however, eviction from North Africa and loss of the central Mediterranean meant collapse.⁸

The Twelfth Air Force began its participation in TORCH at 1625 hours, November 7, 1942, when the 60th Troop Carrier group at Land's End, in southern England, took to the air and set a course for North Africa. Their objective? To capture the important bases of Tafaraoui and La Senia. Forming up in four flights led by Colonel William Bentley, thirty-nine twin-engine C-47s carried thirty-nine officers and 492 men of the 503rd Parachute Infantry Regiment. It was to be an inglorious beginning.⁹

Bad weather caused the formation to disintegrate as the C-47s churned through the skies of the Eastern Atlantic. Crossing the Spanish coast, the planes were fired upon by Spanish anti-aircraft batteries as they neared the Mediterranean. Solid cloud formations over the Mediterranean as well as poor radio communications ensured that the group was hopelessly scrambled upon arrival over Northwest Africa. On the morning of November 8, D-day, Colonel Bentley's flight spotted twelve C-47s on the dry bed of the Sebkra d'Oran, a large salt lake south of Oran. The latter aircraft radioed that they had been attacked by Vichy French fighters and that none of the American transports had reached La

Senia. Realizing that the order instituting the "peace" plan, which included daylight parachute drops, was now irrelevant, Bentley dropped his paratroops to reinforce those on the Sebkra. He then flew on to reconnoiter La Senia. Engine trouble forced his plane down in French-held territory. The French interned Bentley at Oran.¹⁰

The paratroops on the Sebkra received orders to move overland to La Senia. Soon after the paratroops set off on foot, the crews of the C-47s at Sebkra received instructions to proceed to Tafaraoui, which was now in friendly hands. All C-47s took off and five were detailed to pick up the paratroops heading for La Senia. Unfortunately, the transports lacked fighter cover and three were shot down by French fighters.¹¹

Indeed the French were resisting everywhere. Algiers capitulated on D-day, but Oran held out until D-plus-two and Casablanca resisted until D-plus-three. Resistance to Major General George S. Patton, Jr.'s Western Task Force at Casablanca delayed the seizure of the Port Lyautey and Mehdiin airfields. These were not taken until the 10th, thus the XII ASC's aircraft could not fly off the carrier Chenango in time to join the fighting. British carrier-based naval aviation provided initial air support. Once ashore, Headquarters, XII ASC, moved from the beach to the Miramar Hotel at Fedhala.¹²

As the build-up of Allied air power at airfields in Northwest Africa progressed, aerial combat likewise

expanded. As of November 19, 1942, the Twelfth Air Force had deployed four fighter groups, one light bomb squadron, two troop carrier groups, two squadrons of the 97th Bomb Group, and one photographic squadron in Algeria; one fighter group and parts of two bomb groups and a troop carrier group in Morocco. While B-17s from Maison Blanche hit the El Aouina airfield at Tunis on November 21, Axis bombers struck at Allied airfields near Algiers, destroying ten aircraft, including a B-17. On the 22nd, the Twelfth suffered its first serious setback when heavy Axis raids forced it to withdraw its B-17s from Maison Blanche at Algiers back to Tatarouy near Oran.¹³

Ground action also developed at a rapid rate. At mid-month, paratroops managed to seize the airfield at Youks-les-Bains, near the Tunisian border. On the 17th, American paratroops secured the cooperation of the French garrison at Tebessa, just to the south of Youks-les-Bains, and from there began to clash with Italian patrols moving inland from Sfax and Gabes.¹⁴ By November 28, the Anglo-American forces had taken Medjez-el-Bab, Tebourba, and had reached Djedeida,¹⁵ a mere sixteen miles from Tunis. Citing heavy enemy losses, the British First Army's situation report for that date was extremely optimistic. First Army ordered a paratroop attack, the last of the North African campaign, against Oudna, ten miles from Tunis.¹⁶

Carrying 530 men of the British I Parachute Brigade, forty-four C-47s from the 62nd and 64th Groups left Maison Blanche under fighter escort on the 29th of November. The

drop was made between 1330 and 1400 hours at Depienne, ten miles northeast of Pont-fu-Fahs. No air opposition developed and all aircraft returned safely. As we shall see, the same could not be said for the British paratroops.¹⁷

Indeed, it would appear that with British paratroops fighting to take possession of an area only ten miles from Tunis that the Allies would be able to realize their objectives by the first week in December. In spite of the impressive Allied build-up and the generally successful rush forward by Allied ground forces, the Germans were firmly entrenched in Tunisia by the end of November. The speed and size of the Axis build-up was a complete surprise to the Allies. For this, the Germans had relied primarily on their airlift capabilities. The first German aircraft arrived at Tunis on November 9, just twenty-four hours after the Allied landings. Two Stuka (JU-87) groups and a fighter group had landed on the airfields around Bizerta and Tunis. Within four days, German transport aircraft brought in more than 4000 men. The French in Tunisia did not resist the Germans; thus the Axis gained a solid foothold.¹⁸

As the Axis moved to occupy Tunisia in November, 1942, they enjoyed air superiority over the central Mediterranean area as the Allied air forces attempted to establish themselves on the soil of French North Africa. With only four airfields boasting hard-surfaced runways between Casablanca and Tunisia, the orders of French Admiral Jean Darlan, given on November 12, to resist the Axis did little to help the Allied air situation.¹⁹

The Axis enjoyed the use of established bases in Sicily and Sardinia, and had seized all-weather fields in the Tunis/Bizerta region. Though logistical problems prevented them from seizing bases in eastern Algeria, the Germans moved more than 100 aircraft to Tunisia in the first week. The Axis forces were in possession of the relatively flat coastal regions that offered many excellent sites for additional airfields. The Allies, on the other hand, were in possession of rather mountainous terrain in Western Tunisia where sites for bases were few. Moreover, Allied aircraft had to cross the mountains to reach their targets, forcing them to cope with low clouds and increasingly thick fog as winter approached.²⁰

The Allies also suffered from inferior aircraft capabilities in these early months. The mainstay of the American fighter forces for the first two years of the war was the Curtiss P-40E "Warhawk." The British had used the earlier production models of the P-40, and the P-40B "Kittyhawk" saw action with them in North Africa as well as with American forces in the Pacific. The P-40E entered combat with the American forces in the Northwest African campaign. This version had a top speed of 354 miles per hour and a range of 850 miles. Its armament consisted of six .50-caliber machine guns and could be outfitted to carry up to 700 pounds of bombs. It was slower and less maneuverable than its German opponents, yet its rugged construction enabled it to withstand the harsh conditions at Allied bases in

Northwest Africa. Though inferior to the German ME-109 or FW-190, in the hands of capable pilot the P-40E still gave a²¹ fair accounting of itself, especially at low altitudes.

Fighting alongside the P-40E was the disappointing Bell P-39 "Airacobra." Rejected by the RAF, more than half of the 9558 Airacobras produced were eventually sent to the Soviets, who used them in a close support role. Appearing in 1937, the Airacobra was no match whatsoever for German fighters. It had a maximum speed of 335 miles per hour and a range of 600 miles. The Airacobra was relatively well armed, however, with a 37mm cannon and two .30-caliber and two .50-caliber machine guns. The P-39D could also carry 500 pounds of bombs. American pilots quickly learned that the P-39 was completely outclassed by the Axis fighters they encountered in North Africa, and the aircraft type was relegated to a²² ground attack role in which it performed rather well.

By far the best American built fighter in the Northwest African theater at this time was the twin-engine, twin-fuselage Lockheed P-38 "Lightning." The Lightning remained in production throughout the war. Fast and powerful, the P-38F entered the fray in North Africa with a speed of 395 miles per hour and an impressive range of 1425 miles. Its armament, carried in the nose of the aircraft, included one 20mm cannon and four .50-caliber machine guns. This fine aircraft was also capable of carrying 2000 pounds of bombs. The P-38 proved a worthy adversary to its German counterparts, and completely outclassed the Luftwaffe's twin-engine fighter, the ME-110. Unfortunately, in the dark

days of the winter of 1942-43, the Americans simply did not have sufficient numbers of these aircraft to fulfill all their demands, and those that were available were parceled²³ out in small formations like the other aircraft.

By far the best single-engine fighter in the arsenal of the Allies in late 1942 was the superb Supermarine Spitfire. The first Spitfires reached RAF Fighter Command in 1938, and through a succession of improvements the aircraft was able to retain a margin of superiority over most of its adversaries until the appearance of the Luftwaffe's jet fighters near the end of the war. The Spitfire Mark IX, developed in 1942 to oppose the German FW-190, had a top speed of 408 miles per hour but a range of only 434 miles. The Mark IX was heavily armed, boasting two 20mm cannons in the wings as well as two to four .50-caliber machine guns. Together with the venerable Hawker Hurricanes, Spitfires served with the British air units, and American air units flew Spitfires as well.

Facing this array of Allied fighters were the best the Luftwaffe had to offer. The Messerschmitt ME-109 was the Luftwaffe's "first string" fighter throughout the war. Production continued uninterrupted from 1936 to 1945, a total of 35,000 eventually being produced. Blooded in the Spanish Civil War and the early blitzkriegs, this aircraft, like the Spitfire, underwent constant improvements. By 1942, the ME-109G was in service. This aircraft boasted a top speed of 406 miles per hour and a range of 528 miles. A fast climber, the ME-109G was nimble and highly maneuverable. Its

armament included one 20mm cannon and two 13mm and two 15mm machine guns. Flown by experienced and aggressive veterans of many a campaign, the ME-109 was to prove extremely vexing to the Allies' fighter force.²⁵

More formidable than the ME-109 was the Focke-Wulf FW - 190. Entering production in 1941, the FW-190 proved superior to the British fighters then in service, and gave them a nasty surprise when the British first encountered the aircraft over the Channel. The FW-190A-3, produced in 1942 and serving in Africa, was somewhat slower than many of the other aircraft, with a top speed of 382 miles per hour. But it was tough and extremely maneuverable. With a range of 497 miles, the FW-190A-3 packed a mighty punch. Its armament included four 20mm cannons and two 13mm machine guns. Thus, the FW-190 was a deadly weapon against Allied bombers, and many were adapted for use as fighter-bombers. The FW-190 remained in production through the remainder of the war, and would one rival the outstanding North American P-51 Mustang.²⁶

Most Italian aircraft employed in the war were of such inferior design that even in large numbers they failed to make much impact. One Italian fighter, however, deserves mention. That fighter was the Macchi MC-202 Folgore. By Italian standards, this aircraft was produced in large numbers, more than 1100 machines coming off the production lines from 1941 until Italy's surrender in late summer, 1943. The Folgore used a German-designed Daimler-Benz engine, built on license in Italy. This power plant made the Folgore fast, tough, and highly reliable. Appearing in

combat for the first time in November, 1941, the MC-202 had a speed of 372 miles per hour. It suffered from a deficiency common to all Italian fighters until newer designs appeared in 1943. The aircraft was lightly armed, carrying only two 12.7mm machine guns, though later production models carried four. This light armament made the Folgore a poor bomber interceptor and put it at a distinct disadvantage in combat with cannon-armed foes. Still, Allied reports mention the MC-202 quite frequently, and the aircraft is recognized as the best Italian fighter to be built in significant numbers.²⁷

While our attention will soon focus on the activities of the opposing fighter arms, mention must be made of those major aircraft types which performed in a tactical, or close support, role. The most famous of these was the German Junkers JU-87 "Stuka" divebomber. Symbolic of the Luftwaffe's role in the blitzkrieg campaigns, the Stuka had a long and checkered career. Though improvements were made to this inverted gull-winged, single-engine divebomber, the Stuka was too slow and thus vulnerable to effective fighter opposition. The JU-87D-1, appearing in 1942, had a top speed of 255 miles per hour and a range of 954 miles. The Stuka carried two 7.92mm machine guns in the wings and two additional machine guns that fired to the rear. It was capable of delivering its bomb load of nearly two tons with pin-point accuracy but as the craft pulled out of its dive, its speed decreased so much so that modern Allied fighters could destroy it with ease. The Stuka had been the terror of the campaigns in Poland and France, but against the fighters

of the RAF the limitations of the aircraft caused it to be withdrawn from battle. Deemed obsolescent by the Germans by 1942, the Stuka continued in service until the end of the war because of the inability of the German aircraft industry to produce a satisfactory substitute in adequate numbers. Indicative of the Allies' failure to gain air supremacy over Tunisia were the frequent and persistent attacks by Stukas against Allied ground forces. Only on the Eastern Front would the Stuka operate effectively after mid-1943. There, the "G" models, equipped with a 37mm cannon under each wing, proved highly effective against Soviet armor. The Americans and British were fortunate that none of those "tank-busters" was²⁸ available to the Luftwaffe in Tunisia.

The other German aircraft that provided significant close support was the twin-engine Junkers JU-88 medium bomber. The A-4 version had a maximum speed of 269 miles per hour and a range of 1112 miles. Developed for level bombing, the JU-88 could also dive. Heavy losses suffered by the aircraft type during the Battle of Britain persuaded the Germans to increase its defensive armament. The JU-88A-4 had two 7.92mm machine guns firing forward, twin 7.92mm machine guns firing toward the upper rear, and one or two machine guns of the same caliber firing from the rear of a ventral gondola. The A-4 had a total bomb load capacity of 6614 pounds on both internal and external racks. Variations of the JU-88 appeared until the end of the war, the basic airframe serving as a night fighter, reconnaissance aircraft, and, in the closing months of the war, as a

29
pilotless missile.

On the Allied side, no aircraft such as the Stuka existed. For close support, the Allies relied on the Douglas DB-7 family of aircraft. This aircraft type included the aircraft known as the Boston and A-20 Havoc. The DB-7 was planned in 1938 to meet an Air Corps requirement for an attack aircraft. The aircraft served in combat with the French L'Armee de l'Air. With the collapse of France, the aircraft on order were diverted to Britain which converted them into Havoc night fighters. Small numbers of DB-7s served in Northwest Africa. These aircraft had a maximum speed of 295 miles per hour and a range of approximately 1000 miles. The bomb load of the DB-7 was 1764 pounds. The Douglas A-20G Havoc that served in North Africa had a maximum speed of 339 miles per hour and a range of 1090 miles. The A-20G carried a devastating array of firepower in its nose with four 20mm cannons and up to six .50-caliber machine guns. As additional defensive firepower, the aircraft carried two .50-caliber machine guns in a dorsal turret and one manually aimed .50-caliber in a ventral position. The A-20G's bomb load was 4000 pounds.³⁰

Together with the A-20, the Allied bomber force mustered a growing force of medium and light bombers such as the B-26 Marauder and B-25 Mitchell. These aircraft struck at ports and airfields as well as Axis shipping. Together with the four-engine heavies, the B-17s of the Twelfth and the B-24s of the United States forces in the Middle East,

these aircraft flew missions that were more strategic in nature.

Despite the presence of aircraft such as the Havoc and British-flown Martin "Balitmore," the brunt of the close support mission fell to the Allied fighter force. The light bomber force was not sufficiently large to fulfill all requests for support. Thus, fighters were called upon to served as fighter-bombers and perform large numbers of strafing and bombing missions. Later designs of aircraft, such as the Republic P-47 "Thunderbolt" and the British Hawker "Typhoon" would fulfill the role played by fighters in Northwest Africa. Though soundly designed and ruggedly built, American P-39s and P-40s were not armored adequately to withstand heavy ground fire. Furthermore, the mediocre performance of the P-39 demanded that it be provided fighter escort when flying in a ground attack role. As we shall see, these missions, though important, resulted in high losses and further strained the limited resources of the decentralized fighter units.

The types of performances of aircraft aside, one thing was relatively certain by the latter half of November: the mission of the Twelfth Air Force, i.e., covering Spanish Morocco and the Allied flank, was no longer relevant as American and British ground units pushed eastward into Tunisia. The Spaniards did not appear to be threatening the Allied lines of communication through Gibraltar. Doolittle, whose force had by now been released from the task force commanders, went to Algiers on November 19, 1942, to discuss

with the commander of the British Eastern Air Command, Air Marshal Sir William Welsh, plans for the move of the USAAF³¹ into the Tunisian battle.

Doolittle believed his principle responsibilities were to get his striking forces into eastern Algeria and Tunisia while still providing protection for the lines of communication through Gibraltar. The XII ASC remained temporarily at Casablanca; XII Fighter Command moved to Oran; XII Bomber Command moved to Constantine on the 20th. The Algiers area remained under the administration of Twelfth Air Force Headquarters; the advanced headquarters of the Twelfth actually arrived in that city on the 18th. The 14th Fighter Group (P-38s) and the 15th Bomb Squadron (DB-7s) were ordered by British Air Marshal Welsh from Algiers to the Tebessa/Youks-les-Bains area. They moved on the 21st and saw immediate action. The presence of American air units, however, in a sector under British command was to³² play havoc with the command structure. As we shall see, the British commanders would have to follow a complicated procedure in order to make even relatively routine requests for air support from American units. Since no centralized Allied air command as such existed and the American air units were allocated on the basis of the ground units they were to support, British air commanders had no direct line of authority over American air units in their areas. British requests for air support to American air units had to first be approved by American commanders.

Welsh, nonetheless, pressed ahead, and in an effort to

break the rapidly forming stalemate in the air ordered attacks against enemy airfields. Despite intensive raids against Sfax, Gabes, El Aouina, and Djedeida airfields, Axis³³ air activity remained undiminished.

Meanwhile, the British paratroops that had reached Oudna failed to hold against powerful Axis counterattacks. After that setback, British General Kenneth Anderson's First Army never regained its momentum. As his forces fell back, he radioed Eisenhower on December 2 that if he did not reach Tunis or Bizerta in the next few days, a temporary withdrawal would be mandatory. Three factors, said the general, were responsible for his lack of success: administrative tangles, enemy air action, and his low rate³⁴ of reinforcement. We shall concern ourselves with the impact of enemy air action and the Allies' failure in the air.

General Anderson believed that enemy air action was the most important cause of bogging his advance. While his own air force suffered from a lack of suitable airfields, German and Italian aircraft operated from excellent bases in Sicily and Sardinia, and enjoyed the use of all-weather fields at Sidi Ahmed, El Aouina, and the coastal airfields to the south at Sfax, Sousse, and Gabes in Tunisia. By seizing the Tunisian plains, the German ground forces provided further areas for landing grounds. Because of their proximity to the front, these airfields enabled Axis aircraft to provide swift and effective air support to ground forces within five³⁵ or ten minutes of receiving a request for such support.

The Allies, on the other hand, did not enjoy such luxury. In late November and early December, the Allies were operating from just three forward airfields: Bone, 120 miles back from the front, Youks and Souk-el-Arba, 150 and 70 miles from the front, respectively. The latter two airfields, moreover, were frequently muddied by rainstorms and therefore had limited value. Grass landing strips were adequate during good weather; the onset of the heavy winter rains in the Algerian and Tunisian border region rendered such unimproved strips virtually unusable. Attempts to rectify this situation met with little success. Engineers leveled and graded airstrips, packing the earth into a harder surface. Over this, they applied crushed stone and gravel. Unfortunately, drainage at such fields was not always good, and when the earth underneath the gravel became waterlogged, the weight of the aircraft caused the stones to sink in the mud. The British had used steel matting with some success in the Western Desert. In this case, large sections of prefabricated pierced steel matting were placed over runways and taxiways. The matting dispersed the weight of the aircraft over a wider area than usual, thus preventing the aircraft from sinking. Alas, the marginal logistics system in Northwest Africa did not permit large shipments of such materials; Eisenhower himself, as we shall see, realized that the transport network in the region could not handle the needs of all the other units if space aboard railcars was to be set aside for this steel matting. The Allies' situation was further complicated by the fact that

they occupied mostly hilly and mountainous terrain offered few sites for additional airfields. Thus, Allied fighters had to operate at distances that taxed their operational radius, allowing them only five to ten minutes over the battlefield. Axis air units simply withdrew when Allied fighters appeared. When the patrol disappeared, enemy aircraft returned to their work. The Stuka, long since deemed by the Germans as unsuitable for action in other theaters, resumed its role as the terrifying dive bomber of the blitzkrieg.³⁶

In such a situation, how the Allies employed their aircraft could have partially compensated for some of these disadvantages. Instead of concentrating their strength and forming a central air command to respond to Axis air threats wherever they appeared the greatest, the Allies followed the American doctrine of forming smaller packets of air units that were assigned their own specific sectors. Thus divided, the P-38s, Spitfires, and other Allied fighters were consistently outnumbered over the battlefields as the Axis air forces concentrated their striking units into large assault groups. Busy escorting paratroops, bombers, or coastal shipping, the fighters left to fly patrols at the front were hard put to defend themselves against the ME-109s and FW-190s, let alone scatter enemy bombers. Strafing missions drew off further fighter strength and produced few tangible results; the fighters attempting to attack ground targets were faced with powerful enemy opposition which resulted in high losses from both ground and air weapons. As

Anderson reported to Eisenhower, the air forces not only lacked the resources for such a large number of duties, they were suffering from a shortage of spare parts and ground crews as well.³⁷

On December 3, 1942, in the face of fierce Axis counterattacks, Eisenhower informed the Allied Combined Chiefs of Staff (CCS) that he was standing his forces down for a few days of rest. During the interim, as the Allies gathered strength to resume the push on December 9, their bombers were to hit enemy ports to limit the rival build-up. The bombers found their targets increasingly well-defended by enemy air and anti-aircraft units whose opposition limited the effectiveness of the Allied attacks. Plans to conserve fighter resources also had to be scrapped as the P-38s and Spitfires attempted to halt the incessant dive-bombing of Allied troops.³⁸

Eisenhower still hoped to take Tunis by a quick blow, but heavy rains forced him to postpone D-day for another attack. Finally, on Christmas Eve, 1942, the TORCH commander gave up hope of concluding the Tunisian battle before spring. Allied air forces were glued to their bases, allowing the Axis a high degree of protection for their build-up. The battle would now hinge on what Eisenhower termed a "logistical marathon."³⁹

Undoubtedly, the Axis could claim success in the first round of fighting in Tunisia. Vigorous and concentrated action by the Luftwaffe enabled it to withstand the disjointed attacks by the numerically superior Allied air

forces. The Allies' compounded their logistical and basing problems by assuming a defensive stance in the air. While the Luftwaffe engaged in aggressive attacks against Allied forces, the American and British fighter units simply established defensive umbrellas over their own lines and waited for the Axis to come to them. Cooperation among the air units of the various sectors, as we shall see in greater detail, was at best sporadic. Moreover, the FW-190 gave the Germans a temporary technological edge over the mediocre American P-39s and P-40s. The P-38, virtually untried in combat prior to TORCH, proved to be a worthy opponent, but there simply were no sufficient numbers of them or the superb Spitfires to fulfill every task.⁴⁰

The scale of Axis reinforcement in North Africa was indeed impressive. The German and Italian air forces flew 7000 supply sorties to Tunisia in the waning months of 1942 and early 1943. These brought in 14,000 tons of supplies and 40,000 soldiers. Another 50,000 troops came by sea. Compared to the meager supplies provided Rommel as he beat upon the gates of Egypt, these figures lead to conjecture as to what the Desert Fox might have achieved in 1941 and early 1942 had he been so well supplied.⁴¹

Though this transport effort was successful in the short term, the entire German effort to hold the Tunisian bridgehead was to prove catastrophic. With the Allies consolidating their hold on Northwest Africa, Italian convoys were able to get through with "acceptable losses" November 1942. In the following month, Italian shipping

losses surged to forty percent.⁴² The outcome, or at least the duration, of the Tunisian battle would depend largely on the long-range supply situation, and for the dwindling Italian merchant fleet, upon which the Axis were pinning high hopes, Allied air and naval attacks turned the route to Tunisia into the "death route."⁴³

The dispersion of German air strength could only delay the inevitable. In November 1942, the transfer of more than 400 aircraft from the Eastern Front to reinforce the Axis armies in the Mediterranean could not have come at a worse time. By the end of that month, the entire German Sixth Army was cut off at Stalingrad. The resources of the Luftwaffe were not capable of meeting the demands of large-scale transport efforts in both the Mediterranean and Soviet theaters. At the end of 1942, the Luftwaffe had in the Mediterranean twenty giant, six-engine ME 323 transports and 400 tri-motored JU-52 transports, 150 of which had come from the Eastern Front.⁴⁴ The Tunisian airlift cost the Germans 128 JU-52s in November and December of 1942 and another thirty-six in January. These losses were inflicted largely by Malta-based British aircraft. When combined with the losses sustained during the Stalingrad operation, Germany lost 659 transport aircraft together with most of their crews between the autumn of 1942 and the end of January 1943. This figure represented fifty-six percent of the total German transport fleet as of November 19, 1942.⁴⁵ Meanwhile, the German forces at Stalingrad withered for lack of

supplies.

German air strength, despite the losses described above, was quite considerable. On December 31, 1942, contemporary intelligence reports placed German air strength at roughly 865 combat aircraft throughout the theater.⁴⁶ A total of 610 aircraft, excluding reconnaissance, were available for action in Tunisia. Out of a strength of fewer than 1600 aircraft of all types, the Italians mustered an estimated 560 aircraft, though only half were serviceable.⁴⁷ The Allies listed 755 aircraft of all types available to the Twelfth Air Force and 251 available to the RAF, excluding those units of the Western Desert Air Force supporting British General Bernard L. Montgomery's Eighth Army advancing through Libya.⁴⁸

The Germans were able for a time to contest air superiority by directing large numbers of fighters to the Mediterranean. Despite its increased commitments, however, the Luftwaffe's strength failed to reflect the enormity of its tasks. In 1939, for example, the Luftwaffe contained 1125 single-engine fighters. On December 31, 1942, the Luftwaffe, now fighting on several fronts, could deploy only 1240 fighters.⁴⁹

In the face of this determined Axis effort to hold Tunisia, the Allies brought their forces into Tunisia as quickly as they could, though as we have seen, not fast enough to prevent the Germans from digging in. The first United States fighter unit to operate on Tunisian soil, the 58th Fighter Squadron of the 33rd Fighter Group, moved to

newly constructed, dry-weather fields at Thelepte on December 6, 1942, after Eisenhower decided that Tunis would not likely fall anytime soon.⁵⁰ Equipped with obsolete P-40s, this unit had to face superior German aircraft⁵¹ operating from excellent bases. The XII ASC was only able to begin operation in support of the United States II Corps⁵² on January 13, 1943!

Allied fighters were hard-pressed to fill all their roles from the very beginning of the campaign. The vast majority of fighter sorties flown in Northwest Africa in November and December were escort missions of one type or another and included escorting bombers, fighter-bombers (P-39s), naval convoys, and transports. Others were fighter patrols over the battlefield known as umbrella sorties. These umbrellas proved of little value, accomplishing little more than the exhaustion of crews and aircraft while achieving no significant results. In December, for example, out of 2990 sorties flown by the Twelfth Air Force, only 263 were offensive fighter sweeps designed to engage enemy fighters in combat.⁵³ Fighter sweeps represented a show of offensive spirit as opposed to defensive umbrellas where the pilots simply waited for enemy fighters to appear. Only by engaging the enemy air forces in combat and destroying them and their support facilities on the ground could the Allies hope to gain air supremacy. Waiting to engage the enemy on his own terms gave him a great advantage. Moreover, experience was to show that defensive umbrellas would not be able to fend off determined dive bombing attacks carried out

under fighter protection.

Thus, because of inexperience, relatively inferior equipment, and a high level of unproductive ground support sorties, the United States Army Air Forces suffered greater losses in fighters in December 1942 than the Germans, forty-four to forty. In a ground support role, fighters were exposed to intense ground fire that they were not built to withstand. The British had learned through painful experience that German motorized formations were usually quite well protected with anti-aircraft weapons; now, it was the turn of the Americans to discover this. Furthermore, the Americans were attempting to carry out ground support missions in regions in which they had not yet established air superiority, exposing their aircraft to intense German fighter opposition. As pointed out previously, the American air units were divided into smaller subunits, lacking central direction and unable to concentrate an adequate number of aircraft at any one spot to oppose the Luftwaffe. Of all American units during the last months of 1942, only the P-40 outfits showed even marginally favorable loss/victory ratios; at this rate, victory in the air would be a long time in coming.

To make matters worse, ground-air cooperation was abysmal. Air and ground force headquarters were physically separated; the respective staffs did not work together as a team in planning operations. Air command sections simply relayed requests for air support to the units involved.

Joint planning was virtually nonexistent at every level. Such disorder was bound to have tragic results. On November 26, eleven P-38s mistakenly strafed a column of United States troops from Company C, 701st Tank Destroyer Battalion, killing five and wounding sixteen. The men on the ground had not displayed properly the recognition placards that served to identify them as friendly forces. The air crews were also unaware that American troops were in that area.⁵⁵

On December 4, in what was to become a classic example of the misuse of air power, an Allied ground commander ordered a squadron of RAF Blenheim Vs, known as "Bisleys," to launch an unescorted daylight attack on an enemy airfield. The RAF wing commander protested that the aircraft were too slow and lightly armed to fly unescorted; moreover, these obsolescent aircraft were not armored sufficiently to withstand the heavy anti-aircraft fire they would surely encounter. The ground commander persisted and pressed the orders. The target was, in fact, a good choice; the enemy airfield had been used to stage raids on Allied positions. The aircraft and the unescorted mode of attack in daylight were not good decisions. Following the orders of the ground commander, who would not permit a delay in the attack to assemble a fighter escort, the squadron launched its attack⁵⁶ and was completely wiped out.

At the higher levels of command, communications between the ground and air commanders remained tenuous. The headquarters of the ground forces were in Tunisia and those

of the air units were as far back as Algiers. The "penny packets" of air forces, as the British liked to call them, lacked a central, coherent direction. Neither the air nor ground commanders in the United States forces seemed to know how to deal with the problems of command and control, concentration of forces, or positive action. On December 19, 1942, however, one man thought he knew of someone who possessed both the knowledge and, more importantly, the experience to bring order to this mess. British Admiral Andrew Cunningham, commanding Allied naval forces in the Mediterranean, wired authorities in London that "[a]ir out here is chaos. There is one solution and that is to put [British Air Marshal Sir Arthur] Tedder in here."⁵⁷ As we shall see, Cunningham's advice was heeded, but not before further setbacks for the Allied air forces.

The failure of the TORCH planners to provide for the needs of a large air establishment in the event of prolonged fighting in Tunisia was now also painfully evident. The supply demands of the Allied armies strained the capacity of the limited North African transport system to the utmost. Providing for the construction of additional runways capable of withstanding the winter rains proved impossible in the short term. As General Eisenhower reported "[t]he broken stone which we laid down to give solidity to the airfields merely sand in the mud, and to surface adequately a single runway, we required 2000 tons of steel matting. Such a quantity as this would absorb for at least two days the entire capacity of the railroads in the forward area..."⁵⁸

The RAF 242 Group supporting the British First Army made similar points in its reports. Air operations were hampered chiefly by a lack of land communications, air strips, and a lack of knowledge on the part of the Army on the capabilities and limitations of the aircraft and the air forces.⁵⁹

General Anderson thought the deplorable air effort unavoidable, particularly in the situation concerning landing grounds. He cited as major problems the tenuous logistics support, the lack of airfields, and the necessity for the Air Officer Commanding to answer demands for protection as well as satisfy calls for ground support. This situation tied the AOC to Algiers while Anderson's headquarters were far to the east. Thus, coordinated action in either large-scale defensive or offensive operations, was⁶⁰ extremely difficult.

In the face of such uncoordinated action, German air attacks continued unabated. The failure of the policy of flying defensive umbrellas was illustrated in a letter from the commander of Combat Command B, 1st United States Armored Division. Addressed to the United States Army Chief of Staff, General Marshall, the letter was dated December 8, 1942. "I...am sure," Brigadier General P.L. Robinett wrote, "that men cannot stand the mental and physical strain of constant aerial bombings."⁶¹

Many air commanders, including Brigadier General Laurence S. Kuter, stated during this time that a defensive strategy of more or less constant air patrols could not halt

determined enemy air assaults once the attacking aircraft had reached the battlefield. The ground commanders actually had final control over the use of the aircraft, and they tended to keep the planes tied to their particular front in which their interests were, quite naturally, paramount. Each commander agreed that air superiority was desirable but wanted "someone else's" air force to achieve that superiority. By contrast, the Axis air forces moved freely up and down the battlefield, concentrating their striking power against only such opposition as the local Allied air units could muster.

Despite the muddled Allied situation in the air, their own build-up was able to proceed largely unmolested after the opening weeks of the battle. Though the Luftwaffe was flaunting its battlefield prowess, the Axis bomber force failed to mount a coordinated, persistent attempt to halt or even slow the Allied build-up. This failure guaranteed that once they had solved the problems of command and control, airfield construction, and the employment of aircraft, the Allies would in time have an air force of overwhelmingly superior power.

The first two months of the campaign had shown Allied organizational schemes to be hopelessly unfit for the task at hand. The standard United States fighter command could not be easily adapted to the manifold roles required of fighters in the African theater. Nor could bombers be segregated under a bomber command when the duties they performed included anti-submarine and anti-shipping strikes,

strategic bombardment, and strikes on enemy concentrations.

The need for a radical reorganization was obvious to Spaatz, Eisenhower, and other senior commanders. Deficiencies in employment and command and control doctrines could not be solved by time alone. A handful of Allied leaders saw that the doctrine of FM 31-35 was not working and could lead to ever increasing losses in the air if not changed. Others thought better weather, better supplies, and more and better airfields would combine to solve the problems of providing adequate ground support as well as achieving air superiority. Even if this should prove to be true, most Allied commanders were not willing to continue accepting high losses in the air and the continual Axis air assaults until some unknown date when all the current crop of problems would be solved. Obviously, in their vast resources, the Allies possessed the tools of victory. But in January 1943, the Americans still did not know how best to use these tools; for them and their British allies, victory in the air was still a long way off.

NOTES FOR CHAPTER II

¹ Kenn C. Rust, Twelfth Air Force Story in World War II, (Temple City, CA: Historical Aviation Album, 1975), p. 5.

² Ibid., p. 6.

³ Craven and Cate, vol.2, p. 53.

⁴ Ibid., p. 54.

⁵ Albert F. Simpson, "Tactical Air Doctrine: Tunisia and Korea," Air University Quarterly Review IV (Summer 1951): 6.

⁶ Craven and Cate, vol. 2, p. 54.

⁷ Rust, p. 7.

⁸ Michael Howard, Grand Strategy, August 1942-September 1943, vol. 4, (London: HMSO, 1972), p. 143.

⁹ Rust, p. 8. The majority of the French fighter and bomber forces were stationed at La Senia: fifty-five D520 fighters, comparable to the P-40, and forty obsolescent bombers.

¹⁰ Ibid.

¹¹ Ibid.

¹² Craven and Cate, vol. 2, p. 77.

¹³ Rust, p. 10.

¹⁴ Craven and Cate, vol. 2, p. 81.

¹⁵ Rust, p. 10.

¹⁶ Craven and Cate, vol. 2, p. 87.

¹⁷ Ibid.

¹⁸ David Woodward, "The Sea Battles," History of the Second World War, Part 48, p. 1325.

¹⁹ Craven and Cate, vol. 2, p. 83. Those four airfields were Port Lyautey near Casablanca, Tafaraoui and Maison Blanche near Oran, and the field at Bone.

²⁰ John Strawson, The Battle for North Africa, (London: B.T. Batsford, 1969), p. 163.

²¹ Enzo Angelucci, The Rand McNally Encyclopedia of Military Aircraft 1914-1980, (New York: The Military Press, 1983), pp. 126, 154.

²² Ibid., pp. 193, 225.

²³ Ibid., pp. 197, 230.

²⁴ Ibid., pp. 185, 218.

²⁵ Ibid., pp. 186, 219.

²⁶ Ibid., pp. 187, 220.

²⁷ Ibid., pp. 188, 221.

²⁸ Ibid., pp. 275, 297.

²⁹ Ibid., pp. 256, 279.

30 Ibid., pp. 266, 287.

31 Craven and Cate, vol. 2, p. 83.

32 Ibid., p. 84.

33 Ibid., p. 88.

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37 Ibid., p. 90.

38 Ibid., p. 91.

39 United States Department of the Air Force, "Ad Hoc Committee on Tactical Employment of Air Power," undated, AFHRC K168. 15-43, v. 13, Maxwell AFB, Ala. Hereafter referred to as "Ad Hoc."

40 Tantum and Hoffschmidt, p. 249.

41 Strawson, p. 166.

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United States Navy, "Notes on the German Air Force," reprinted from British Air Ministry Report, April, 1943, AFHRC 512.6314 A, Maxwell AFB, Ala., p.1.

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U.S. Army Air Force, Army Air Forces Wings at War Series #6: The AAF in Northwest Africa, (Washington, D.C.: HQ, USAAF, undated), p. 31.

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United States Army Air Force, "Disposition of Axis Air Forces, Status of German Air Force, 9 January, 1943," 14 January, 1943, AFHRC 142. 0302-4, Maxwell AFB, Ala. See also Tantum and Hoffschmidt, p. 209.

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Rust, p. 12.

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Headquarters, XII Air Support Command, "XII Air Support Command Operations in Tunisia, January-May, 1943," 9 June, 1943, AFHRC 651.04-1, p. 2.

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Ibid.

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Headquarters, Twelfth Air Force, "Operations of the Twelfth Air Force, 8 November 1942 through 8 May 1945, Statistical Summary," undated, AFHRC 650.3084-1, Maxwell AFB, Ala., Table II, p. 110.

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Ibid. Table III, pp. 262-264. The record of the 58th Fighter Squadron showed that to January 13, 1943, it flew 646 sorties, claiming fourteen tanks, six half-tracks, 200 trucks, two locomotives, twenty railcars, and only fifteen aircraft.

55

Howe, p. 302.

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Brig. Gen. Laurence S. Kuter, "Lessons in Air Force Organization Learned from the North African War," 22 May, 1943, AFHRC 614.505, para. II, b, 4.

57

Howard, p. 185.

58
Ad Hoc, p. 22.

59
Ibid.

60
Ibid., p. 25.

61
Ibid., p. 29. The letter went on to state that
"[n]ews of bombed cities or ships or ports is not the answer
they expect. They know what they see and at present there is
little of our air to be seen."

62
Ibid., pp. 28 A&B.

63
Tantum and Hoffschmidt, p. 252.

64
Ad Hoc, p. 15. See also Craven and Cate, vol. 2, p.
162.

CHAPTER III

WINTER COMBAT: THE FAILURE OF AMERICAN DOCTRINE AND THE NORTHWEST AFRICAN AIR FORCE

Within days of the TORCH landings, Allied leaders recognized the need to restructure the air command system in the Mediterranean. With the theater of active combat shrinking and direct air action against Italy still a real possibility, on November 19, 1942, the CCS called for the views of interested parties on the subject of a combined air command. British Air Marshal Sir Arthur Tedder, visiting Algiers at the time, urged a command that would allow the operations of all the existing commands to be consolidated or at least act in complementary roles. Sharing Tedder's view, the British Chiefs of Staff urged that Eisenhower accept Tedder as the Allied air commander for the theater.¹

On December 3, 1942, however, General Eisenhower appointed Major General Carl A. "Tooe" Spaatz as the "Acting Deputy Commander-in-Chief for Air, Allied Force." Despite the rather high-sounding title, the machinery of command at Spaatz's disposal was largely built upon a number of hasty improvisations. Eisenhower felt that the air plan for TORCH was no longer relevant and that something had to be done to provide some coherent direction to the Allied air forces. He had a great deal of respect and admiration for

Spaatz. Thus, "Tooeey" Spaatz set about the duty of coordinating action not between the Eighth Air Force in England and the Twelfth Air Force in Africa, but between the Twelfth and the RAF Eastern Air Command. Eisenhower's decision marked only the beginning of a succession of command changes that culminated in the total overhaul of the Allied command structure in mid-February.²

Spaatz's task was compounded by the fact that the headquarters of the various land, air, and sea commands were widely separated. Coordinated action was thus quite difficult. Further aggravating the situation was a rather poor communications network. Moreover, United States air units had begun moving eastward. Until the American ground units they were designated to support moved into their assigned sectors of the front, these air units were placed under Welsh's RAF organization. Unfortunately, the British air marshal had no authority to command these American units, and had to work through Doolittle. Despite the fact that both Welsh's and Doolittle's headquarters were located in the vicinity of Algiers, the task of coordinating action frequently involved traveling great distances for personal conferences.³

By December 4, Spaatz switched the heavy bomber effort from airfields to ports in an attempt to slow the Axis build-up. He directed light and medium bomber units against Axis airfields, ordained rest for the weary air forces, and achieved a rough division of labor between the Eastern Air Command and the Twelfth. The latter was to concentrate on

ports and other "strategic" targets. The Eastern Air Command was to cooperate with the ground forces. Tedder continued to press for a unified air command. Spaatz worked on the more⁴ immediate problems facing the Allied air forces.

The Allies used various stop-gap methods to find short-term solutions to the problem of command and control within the air forces, while Eisenhower used the lull in the fighting to examine the merits of long-term solutions to the same problem. Perhaps the most significant measure taken during the hectic days of January was the activation by AFHQ of the Allied Air Support Command (AASC). From January 22, 1943, this new command was to coordinate air support until arrangements decided upon at Casablanca several weeks before could be instituted. These arrangements will be⁵ discussed later.

In command of this new outfit was Brigadier General Laurence S. Kuter. A West Point graduate, Kuter served during World War II as a planner in the Air War Plans Division and as a bomber pilot, commander of the First Bombardment Wing, Eighth Air Force, and finally as Assistant Chief of Air Staff, Plans, Army Air forces. Before the war, he had been on the faculty at the Air Corps Tactical School, where he developed a decided dislike for the War Department's views on tactical air support. Kuter had also been critical of the manner in which the Allied air effort had been managed in Africa. He was thus quite willing to take part in any organization or plan that would promote

greater unity of command within the air forces.

Under Kuter, the AASC controlled the operations of the United States XII ASC and the RAF 242 Group.⁷ The XII ASC moved up to the Youks-les-Bains and Thelepte airfields earlier in the month to support the United States II Corps. The RAF 242 Group covered the British First Army from the fields of Souk-el-Arba.⁸

The XII ASC became as of January 13 the air force contingent supporting Major General Lloyd R. Fredenall's Corps which had moved into the center of the Allied line in the Tebessa region. Relatively inactive up to this point, the XII ASC had administered the Moroccan area. Now under the command of Brigadier General Howard A. Craig, the XII ASC looked forward to the prospect of testing American air-ground techniques.⁹

Meanwhile, the chaotic air and ground situation had attracted the attention of both President Roosevelt and Prime Minister Winston S. Churchill of Great Britain. For ten days, beginning on January 14, Roosevelt, Churchill, and the Allied Combined Chiefs of Staff met at the Anfa camp outside Casablanca to discuss and plan global strategy. The British in particular were interested in continuing the Mediterranean campaign and exploiting the African lodgement.¹⁰

In the face of the dismal performance of their air forces in Africa, the Allied leaders also decided upon some major command changes, both in structure and in personalities. As we shall see, these changes would have

far-reaching effects on American tactical doctrine. At an unstipulated time after the Eighth Army crossed into Tunisia, British General Harold Alexander was to become Eisenhower's deputy and the Eighth Army would pass under the control of AFHQ. Subject to Eisenhower's approval, Alexander, in command of what would become the 18th Army Group, would direct all Allied ground forces on the Tunisian front. To match this comprehensive ground organization, the CCS also agreed on one overall air command by adopting the proposals of the British Chiefs of Staff. Tedder was to become air commander-in-chief. Under him were to be two principal subordinates; Spaatz would become the air commander for Northwest Africa; British Air Chief Marshal Sir Sholto Douglas would command the air forces of the Middle East.¹¹

Under his command, Spaatz would have at his disposal the British Western Desert Air Force (WDAF), the United States Twelfth Air Force, and the British Eastern Air Command. From these, the CCS required that three main subcommands be formed: a heavy and medium bomber force with appropriate escort fighters, a coastal air force for port and shipping protection, and a tactical air force. This last command, which will soon be the center of our attention, was to work in conjunction with General Alexander and to include the three air detachments cooperating with the main ground formations, the British First and Eighth Armies and the United States II Corps. Air Vice Marshal Arthur Coningham,

who had orchestrated the overwhelmingly successful aerial campaign for Montgomery's army, was chosen by the CCS to command this new tactical force. The date for implementation, as well as many important details, were still to be worked out.¹² Now a coherent plan for a new air command structure existed toward which all the previously mentioned stop-gap planning could be directed. Unfortunately, embarrassing events in January 1943 and near catastrophe in February would soon justify the need for a new system and a new doctrine.

Events continued to go badly for the Allied air effort as 1942 gave way to 1943. The XII Fighter Commander had begun to encounter new targets that represented the growing strength of the Axis forces in Tunisia: large enemy armor and troop concentrations. As the number of Germans increased in central Tunisia, it became obvious to the Allied leaders that the Axis forces might try to drive westward so as to expand their bridgehead and insulate their lines of supply to Rommel's army, which was arriving in Tunisia after its long retreat across Libya.¹³

On January 17, the XII ASC was now in place and responsible for cooperating with the II Corps as well as meeting requests from French elements to the north. Together with these French requests, to be passed through General Fredendall, XII ASC had the authority to arrange for mutual assistance with the 242 Group to the north. General Craig, commanding XII ASC, was quite familiar with Coningham's

Western Desert philosophy on air power and was rather unhappy with current American doctrine. Craig also knew he faced the Axis with his air establishment weakened by weeks of combat. As of January 9, Craig had but two understrength squadrons of the 33rd Fighter Group and the entire 47th Bomb Group. In contrast to this situation, the airfield arrangement looked somewhat better with Youks, Thelepte, forward strips at Gafsa and Sbeitla, and fields under construction or planned for Tebessa, Le Kouif, and Kalaa¹⁴ Djeida.

Craig was painfully aware of the deficiencies of his command. He considered the 47th poorly trained and fit only to be withdrawn. The 33rd suffered low aircraft serviceability because of a lack of spare parts. Craig thought he needed time to build up his strength and desired no role in any offensive action planned for the next few weeks. Doolittle concurred with XII ASC's plans to conserve strength. Thus, XII ASC, from January 8 to the 18th, was relatively inactive, save for normal reconnaissance and¹⁵ defense of its own airfields from Axis air raids.

On January 18, as the II Corps was moving up reinforcements for a local offensive codenamed SATIN the Germans, with a powerful armored force in Operation COURIER, struck at the weak sector of the front defended by Free French forces. Hit hard, the French line collapsed under the weight of the German attack. As the French fell back, British and American forces moved up to plug the hole in the

line. By January 25, after making moderate gains, the German¹⁶ attack subsided.

During the first three days of COURIER, flaws in American air doctrine, particularly concerning coalition warfare, became evident. The XII ASC flew no missions in the area of the French under front attack because the air command was under the control of the II Corps, whose commander had "no interest in the region."¹⁷ That area lay in the RAF's zone of responsibility and despite the gravity of the situation, the XII ASC lent the British no assistance. Even a simple French request for reconnaissance support was denied by the XII ASC on the ground that the II¹⁸ Corps had no interests or responsibilities in the area.

Alarmed by such an attitude, Spaatz realized that this method of waging "independent" air wars would certainly not yield satisfactory results. On January 22, he cabled Tedder, informing his future superior that "[a]ir support situation¹⁹ [is] critical." He wanted to implement an interim measure, the aforementioned Allied Air Support Command under Kuter. By so doing, Spaatz hoped to achieve some coherent direction for air support and get XII ASC out from under II Corps' control.²⁰ Kuter was relatively successful, and by February 7 was able to report to Spaatz that he was exercising operational, but not administrative, control over both XII²¹ ASC and 242 Group.

Despite the presence of Kuter's organization, final authority for the use of aircraft still rested with ground

commanders. The result was a situation in which both the XII ASC and the 242 Group were attempting to provide full ground support prior to attaining even a measure of air supremacy.²² This was despite the fact that XII ASC's stated objectives were first, to deny the enemy the use of the air; second, to provide the ground troops with reconnaissance; and third, give close support to the ground troops by bombing and strafing.²³

An examination of the types of missions flown by the XII ASC during this period shows that its activities were geared more toward its third objective rather than its first. From January 13, when the command became operational in Tunisia, to February 14, nearly half of its sorties, 880 out of 1801, were flown in reconnaissance, bombardment, or strafing missions.²⁴ Only 172 were offensive fighter sweeps. In a typical week for this period, January 29 to February 4, the XII ASC flew 628 sorties; 158 were cover or "umbrella" sorties, 128 were reconnaissance, and 101 were against enemy tanks and motor transport. Although no fighter sweeps were flown, losses were extremely high. Twenty-four American aircraft were lost, compared with only eight for the enemy.²⁵

A typical strafing run occurred on January 21 when twenty-four P-38s destroyed sixty-five trucks and shot down two ME-109s. Two P-38s were also lost. The following day, two more fighters went down and four were reported missing while out on strafing runs.²⁶ If destroying large numbers of enemy trucks was indeed important, the loss of eight aircraft in

two days represented a casualty rate that the resources of the XII ASC could not sustain.

There were several reasons for the high losses sustained by the American in the air. Since Allied air resources were decentralized, a sufficiently large number of aircraft could not be concentrated to produce an overwhelming strike force against enemy ground or air targets. Attempting to attack enemy ground targets in the face of strong fighter resistance obviously added to the toll. The Germans were sufficiently flexible that they could concentrate fighters in a threatened zone. Outnumbered and flying outclassed aircraft, the Americans suffered heavy losses in relation to the Luftwaffe. And since each "packet" of air was restrained by corps or army boundaries, a request for assistance, as we have seen, was not always answered.

By January 26, the operational strength of the XII ASC stood at fifty-two P-40s, twenty-three P-39s, twenty-seven A-20s, and eight DB-7s. This force was responsible for a relatively small sector of the front, but continued to labor under the handicaps of poor training, insufficient stocks of spare parts and equipment, and poor aircraft performance. The P-39, when used in a ground attack role, performed admirably. In ground attacks, unfortunately, it occupied further fighter resources that were required to provide²⁷ escort.

On January 30, the Germans once again hit the French, this time at Faid Pass. Spearheaded by a force of more than

seventy tanks, the German drive pushed the French back. On this occasion, Kuter managed to get the XII ASC to participate and it vigorously attacked the German forces. The XII ASC lost a P-39 but was able to claim a dozen tanks.²⁸ The following day, ground commanders feared a possible Stuka attack that usually accompanied such German assaults. The XII ASC's fighters were ordered onto the defensive over the Faïd Pass. During the day, large enemy fighter formations claimed two American fighters while losing one of their own.²⁹ Fortunately, the Stukas never appeared.

As the fighting continued, the XII ASC suffered serious losses while attempting to provide cover over a wide front. On February 2, the 33rd Fighter Group was taxed severely to provide a protective umbrella as well as escorts for bombers of the 47th and the P-39s of a newly arrived observation group. The first cover mission of six P-40s and four P-39s encountered a formation of twenty to thirty Stukas and their escort of eight to ten ME-109s. Although one Stuka was shot down, the escorting German fighters shot down five P-40s. A reconnaissance mission of six P-40s and four P-39s met four to six FW-190s over Kairouan, destroying two but losing two P-40s and a P-39. Two more P-40s were lost on an A-20 escort mission as the American fighters attempted to fight off a large formation of ME-109s.³⁰

The technical superiority of German aircraft was demonstrated beyond any doubt during these engagements, but technical superiority alone did not give the Germans an edge

over the Americans in the air. Pilot fatigue, caused by long patrol and cover missions reduced crew effectiveness in combat. There were simply not enough pilots and aircraft in the XII ASC alone to meet adequately every demand.

Furthermore, as the British had proved during the Battle of Britain, the outclassed Hurricane, when concentrated in sufficient numbers and flown aggressively, could hold its own in combat with the superior ME-109 while at the same time inflicting grievous losses on the enemy bomber fleet. The enormity of the tasks assigned it, in a word, overwhelmed the resources of the fragmented Allied air command.³¹

By February, Axis fighter strength in the theater reached 600 aircraft, divided nearly equally between Tunisia and Sicily and Sardinia. The total force available to the Axis was approximately 1300 aircraft. Allied air strength, including units operating from Libya and Malta, stood at nearly 3000 machines.³²

Fortunately, the Axis command structure made that of the Allies look like a textbook model. The Axis command was not only cumbersome, it was fragmented as well. Both on the ground and in the air, the Germans had been carrying the brunt of the fighting in North Africa since the collapse of the Italian Army in the winter of 1940-41. The German commanders in the area, including and especially Rommel, clashed with their nominal superiors in Rome. The Italian High Command was theoretically in command of all Axis forces. Field Marshal Albert Kesselring, however, was

appointed German Commander-in-Chief South and exercised actual control over all German forces in the theater, including the Luftwaffe's Second Air Fleet. As a result of this system of control, the Italian and German air forces never formed a cohesive, unified command, and the two remained rigidly separated along national lines.³³

As each side grappled with the problems of command, one aspect of the Allied air effort was beginning to show some promise. This was the anti-shipping campaign. The Italian navy attempted to ensure safe passage of Axis convoys to Africa. The short lines to Tunisia ran at fairly high efficiency in November and December, largely because the Allied air forces were facing myriad problems consolidating their position in Africa, while the RAF on Malta was busy slaughtering the convoys bound for Libya during Rommel's retreat. Once in place in northwest Africa, however, the Allies began striking in a coordinated campaign at ports in Sicily, Italy, and Tunisia. The acquisition of Vichy shipping and the cessation of the murderous runs past Malta to Libya placed the Italian navy in January in a better position to keep Tunisia supplied. As a result of increasing Allied attacks, Axis shipping losses on the Tunisian route nonetheless averaged twenty-three percent in the period from 34 December 1942 to February, 1943.

As the Allied air assault intensified, the Axis was forced to divert large numbers of fighters for convoy escort duties. In the first months of 1943, combined RAF, Fleet Air

Arm, Twelfth Air Force, and Royal Navy action sent 107 large Axis ships to the bottom, for a total of more than 400,000 tons of shipping.³⁵

In Africa, the Axis forces in mid-February were in the best position they could expect to be in for the duration of the campaign. The Eighth Army was exhausted and walled off at Mareth. Before Montgomery could gather strength to launch a full-scale assault, Rommel sensed the possibility of smashing through the Allied lines in the center of Tunisia and thus roll northward to the coast, cutting off the Allied forces facing Tunis and Bizerta.³⁶

To that end, Rommel began sending armor northward. On the 14th of February Operation SPRINGBREEZE opened with the 21st Panzer Division striking in the region of the Faid Pass. The XII ASC threw in what aircraft it could in strafing runs and managed to shoot up some enemy truck convoys. The allies were forced to retreat. Relatively inexperienced American troops led by equally inexperienced commanders were facing battle-hardened German armored formations. For the first time in World War II, the German Army faced a major American fighting force in combat. With no less a person than Field Marshal Rommel leading the attack on "poor, bumbling Fredendall's II Corps," the Battle of Kasserine Pass had begun.³⁷

The Germans also took the offensive in the air. On the 15th, the fields at Thelepte were attacked by large numbers of Axis bombers and dive bombers, while fighters strafed the

area. Aircraft of the XII ASC patrolled in the region of Sidi bou Zid. American medium and heavy bombers carried out raids against the crowded German airfield at Kairouan and met with some success. The XII ASC did what it could in the rapidly deteriorating situation. Still, the German attack rolled forward in the face of crumbling American resistance.³⁸

By the 16th, the losses suffered by the II Corps had reached serious proportions. The Germans took Gafsa as the II Corps fell back to Kasserine Pass. In two days of fighting, the II Corps lost ninety-eight tanks, fifty-seven half-tracks, and twenty-nine pieces of artillery. An immediate American counterstroke was therefore rendered impossible.³⁹

Operating under pre-arranged evacuation plans, XII ASC abandoned five of the precious airfields from February 13 to the 21st. Thelepte field fell to the Axis on the 17th as the Germans and Italians drove forward from Gafsa. More than 60,000 gallons of aviation fuel were poured out by retreating American ground staff. Ground crews blew up rations and burned eighteen aircraft, five of which were non-reparable in any event. All XII ASC airfields that were evacuated were cleared in an efficient and orderly manner.⁴⁰

In the midst of this disaster, Air Vice Marshal Arthur "Maori" Coningham arrived at 18th Army Group headquarters to implement the reorganization outlined at Casablanca. He assumed command of the AASC, which in the shuffle of the

next day was to become the Northwest African Tactical Air Force (NATAF). A native of New Zealand, "Maori" Coningham had led the Royal Air Force in the Western Desert theater of operations in North Africa. There, together with Tedder and Montgomery, he developed a system of aerial warfare that he would soon implement in Tunisia. Because of his nationality, Coningham became known as "Maori" which through colloquial usage became "Mary." No one ever mistook the nickname "Mary" as a sign of weakness, however. Coningham was a tough, no-nonsense commander who understood thoroughly the art of aerial warfare. As we shall see, he was instrumental in asserting the necessity for air superiority as a pre-requisite for all other types of air operations.⁴¹

Upon his arrival, Coningham found the Allied air situation in total disarray. Bombers were on call but not used; the lack of coordinated air-ground staff planning as well as general confusion and a lack of communications allowed the wastage of Allied air resources. Fighters had been expended in what he considered wasteful and fruitless defensive umbrellas that managed to stop neither Axis air attacks nor end their control of the air. Hereafter, Coningham ordered, the maximum offensive role would be emphasized in every mission. The air marshal believed that an air force on the offensive against the enemy's air arm automatically protected friendly ground forces by forcing the foe to protect himself. As far as ground targets were concerned, Coningham ordered that tanks be let alone; enemy

concentrations and "soft-skinned" vehicles were better
⁴²
 targets.

Coningham's strength of purpose could do little to help XII ASC in the immediate battle. The weather had deteriorated so that nothing got off the ground on the 19th ⁴³ while on the 20th, the XII ASC flew only eight sorties. In fact, prior to the battle, the XII ASC once again attempted to conserve its strength through lessened activity. For the week ending February 14, the XII ASC flew 443 sorties, none of them fighter sweeps. For its efforts, the XII ASC claimed two enemy aircraft but lost three of its own fighters plus ⁴⁴ another seven aircraft damaged in combat.

As the Allied forces continued to pull back, Tebessa airfield fell to the Germans on the 21st; American fighters were now limited to Youks as their only forward base. ⁴⁵ Consequently, overcrowding reached dangerous proportions.

The weather cleared sufficiently to allow XII ASC to fly twenty-six sorties on the 21st, but coordination with the ground forces remained poor. Antiaircraft fire from Combat Command B of the United States First Armored Division turned back two friendly missions and damaged five aircraft beyond repair. Despite warning, the following day friendly antiaircraft fire damaged five P-38s. General Robinett of Combat Command B issued an order not to fire on any aircraft ⁴⁶ unless it fired first.

The 22nd marked the high point of the Axis effort. German armor pounded the defenses of Tebessa and Thala, but

the Allied line held. That day, XII ASC flew 114 sorties, virtually all of them in support of the ground troops. Despite marginal weather and heavy enemy antiaircraft defenses, only one light bomber was lost. Such relatively light air support did little to effect the situation on the ground. In any event, Rommel, sensing that victory was now outside his grasp, ordered his forces to retreat that evening. The German withdrawal began in earnest the next day, and all Allied air resources were devoted to punishing⁴⁷ the enemy as he pulled back.

On the 23rd, the XII ASC flew 143 sorties, all directed at the withdrawing Germans and Italians. Their impact was at best marginal; certainly, this scale of activity in the air would not suffice if the Allied goal was to seriously impede Rommel's withdrawal. During the most critical battle thus far in the campaign, the XII ASC mounted only 471 sorties from February 17 to the 23rd. This relatively low level of activity was due largely to the heavy rains and thick fog over the mountains separating XII ASC units from the battlefield. The overall Allied performance in the air was poor; air-ground cooperation was unsatisfactory, and ground commanders complained of too little reconnaissance, slowly executed support missions, and a perceived dominance of the air by the Axis caused by the relative lack of Allied air⁴⁸ activity.

Cunningham's arrival, however, together with the presence of Tedder, Alexander, and Kuter, heralded a dramatic change

in air doctrine and performance. These men would be responsible for changing American behavior from merely preventing the enemy from damaging friendly forces to destroying him in battle. At the same time, Coningham would erect the command structure necessary so that the ground and air staffs could work together. Coningham stressed the theory of concentration of forces. He believed that aircraft, like tanks, were most effective when fighting in a coordinated, large-scale effort instead of fragmented units operating essentially independent of each other. He also recognized the obligation of air forces to provide support to the ground troops, but stressed the need to win the battle in the air first. Under Coningham, the Allies' tactical forces would be consolidated under and directed from a single headquarters that was in close contact with the ground forces.⁴⁹

THE NORTHWEST AFRICAN AIR FORCE

Since the Casablanca Conference, the various Allied headquarters agencies had been busy settling the details for restructuring the Allied air commands. By mid-February, the plans were finished but the situation was, as we have seen, quite unpromising. Nevertheless, on the 20th, Eisenhower announced sweeping command changes in his ground and air forces. As planned, General Alexander became Deputy Commander-in-Chief of Allied Force as well as commander of the 18th Army Group.⁵⁰ Tedder assumed command of the new Mediterranean Air command (MAC) on February 17. He had at

his disposal the United States Ninth and Twelfth Air Forces, the RAF Eastern Command, RAF Middle East, including the WDAF, and RAF Malta. The new command also contained three subordinate commands called for by the decision at Casablanca: Northwest African Air Force (Spaatz), Middle East Air Command (Douglas), and RAF Malta Air Command (Air Vice Marshal Sir Keith Park).⁵¹

Drawing on his experience in the Western Desert, Tedder felt that proper coordination between ground, sea, and air elements could only be achieved by close cooperation among the various headquarters. This was very much in keeping with Coningham's philosophy. Meanwhile, Coningham duly established his headquarters of the Northwest African Tactical Air Force in the Souk-el-Khemis area near the headquarters of the British First Army and the advanced headquarters of the 18th Army Group. The light bombers and fighters of RAF 242 Group would continue to work with the First Army; those of the XII ASC with the II Corps; and WDAF⁵² remained with the Eighth Army.

Both Tedder and Coningham reflected the difference between American and British tactical doctrine. Indeed, from Churchill and Montgomery down through the ranks of command, the British considered the tasks of their air force co-equal with those of their army; i.e., the achievement of air superiority and the use of aircraft against ground targets was to be planned and carried out by an air command that worked with, but was not subordinate to, the ground command.

In the aftermath of several setbacks in the autumn of 1941, Churchill cabled the commanders of the WDAF and Eighth Army, Tedder and General Claude Auchinleck, respectively, and stated that "nevermore must the ground troops expect, as a matter of course, to be protected against the air by aircraft." Churchill reinforced his point by directing a shipment of antiaircraft guns to the Eighth Army.⁵³

General Bernard Montgomery, a ground soldier, challenged American notions as well. In a speech given at Tripoli, Libya, on February 16, 1943, Montgomery reflected on the bitter lesson regarding the need for air superiority that he had learned in France in 1940.

The commander of an army in the field should have an air headquarters with him which will have direct control and command of such squadrons as maybe allotted for operations in support of the army. Such air resources will be in support of his army and not under his command... All that is required is that the two staffs, Army and Air, should work together at the same headquarters in complete harmony and complete mutual understanding and confidence.

Montgomery also believed that air power should not be divided up into "small packets" under the command of army commanders but should be concentrated under a single command, operating as a powerful strike force. "The soldier must not expect nor wish to exercise direct command over air striking forces."⁵⁵

In a speech immediately following Montgomery's at Tripoli, Coningham proclaimed that "[t]he soldier commands the land forces, the airman, the air forces... the Army must

understand that penny packets of air [are] a luxury...and that judgment on the question of targets is the result of an agreement between the Army and Air commander." Coningham emphasized the dual tasks facing an air force (winning air superiority and supporting ground troops) and stated that the ground commander understood only one of those tasks, air-ground support. The air force, according to Coningham, has "first of all to beat the enemy in the air so that it may go into the land battle against the enemy land forces with the maximum possible hitting power."⁵⁶

General Alexander also thought as Montgomery did. He told Kuter, now Coningham's deputy at NATAF, that he "never had and never would issue orders to an air unit."⁵⁷

Tedder suspected, however, that breaking down long-established American notions about air power was going to be difficult. He realized that the war could not be won without American resources and power, but thought "undue deference" to national sensibilities could ruin the entire enterprise in Africa.⁵⁸ Tedder believed that the American air units, such as the XII ASC, were fighting separate wars, devoid of any cooperation among themselves and lacking proper coordination with the ground units. He considered the American air effort thus far to be lacking in offensive effort as well.⁵⁹ In a cable to British Chief of Air Staff Sir Charles Portal, Tedder stated his belief that "Coningham is not going to have an easy time to get rid of the fantastic ideas of soldiers controlling aircraft."⁶⁰ He knew that some minor

concessions might be necessary. Tedder considered that the name "Air Support Command" conjured images of a subordinate air force, thus he settled on Northwest African Tactical Air Force. He allowed the United States XII Air Support Command to retain that title as, in his words, a "sop to sentiment"⁶¹ which he thought necessary to allow.

Tedder's task of reorganization was made no easier by several searing communiqués from Churchill. In late February, the prime minister sent a caustic message to Portal demanding positive action in the air war in North Africa. In spite of the assignment of 1200 American and 500 British first-line aircraft plus the 1000 machines of the Middle East Air forces, Churchill cited "our total failure to build up air superiority" as proof of the utter misuse and lack of direction of Allied air power. "The outstanding impression on my mind of the four months since the landings is the failure and breakdown in Allied air." Churchill pressed his attacks even further. "You have not been able to stop the use of any of the [enemy] ports or the movements of large forces. When the attack came [Kasserine] you could give no support to our troops worth speaking of. Of course, there was always the weather which, as everyone knows, does not affect the enemy."⁶²

Portal assured Churchill that he was correct in his rather sarcastic assertion that the weather had a one-sided effect. Axis airfields were on flat ground close to the front whereas Allied fields were separated from the battle area by mountainous country, which, in bad weather, was

covered by low cloud ceilings. Together with the unsuitable nature of most Allied airfields and the rawness of American troops, these factors gave the Axis a tremendous advantage. Portal also pointed to the minimal losses sustained by Allied fleets; of total of 561 ships proceeding to Algiers or eastward, only fourteen were sunk by enemy air action from November 8, 1942, to January 21, 1943.⁶³ Still, Portal was cognizant of the basic truth of Churchill's accusations. Tedder's mandate was to reverse the unfavorable trend.

Tedder wrote to Portal that past lack of success and heavy losses to a numerically inferior enemy had resulted largely from a lack of the "right" type of operational control. Fighters had been "frittered away" by giving cover or attacking "petty targets," all on the orders of local ground commanders. Under such conditions "losses have been high, enemy air has been aggressive and impudent...the basic remedy is proper organization and control."⁶⁴

Many American officers did not agree with Tedder's remedies. The United States Army's official history of World War II reflected these sentiments when it noted that the "reorganization of 19-20 February, 1943, was destined, through the use of ground-air doctrines tested in Libya, to promote by painful but inexorable steps the achievement of Allied air supremacy in Tunisia."⁶⁵

General Mark W. Clark, commander of the United States Fifth Army, became upset when he learned in March 1943 that a detachment of the XII ASC would cease functioning at his headquarters. Fifth Army was at the time training for the

upcoming Italian campaign, and Clark thought his troops should train with air support. In a letter to the Commander-in-Chief, Allied Force, Clark pointed out that combat experience in Tunisia proved that "we were lax in our ground and air teamplay." The only way to resolve these problems, he wrote, was for "ground and Air Corps officers to work and live together for a reasonable period of time." To this point, he and Tedder were on common ground. He ended the letter, however, with a statement that ran counter to Tedder's beliefs. "The only way this can be done is to have the nucleus of an air support command with means of communication under my control at my headquarter.⁶⁶"

Headquarters, Northwest African Air Force, asked Kuter to respond to this letter. Kuter's primary objection was to Clark's assertion that the air support command was to be under his (Clark's) control. He suggested the following as a reply: The last sentence in the quoted paragraph is the strongest evidence that the Detachment XII ASC must be disbanded immediately to avoid further indoctrination of both ground and air units in organization and operation which have been proven to be not only unsound but invitations for disaster in this very theater.⁶⁷

On March 10, Spaatz and Tedder went to see Clark at Oudjda in Morocco to help settle the matter. Clark remained unconvinced of the need to disband the detachment and thought that the two air commanders "were not wholly in sympathy with the War Department view (which was also my [Clark's] view) on close air support." Clark suspected that the British thought more in strategic terms than in terms of

close support of ground operations. He was dismayed to discern from Tedder's comments that this attitude was⁶⁸ growing among American air officers.

In his memoirs, Clark wondered "whether the ground troops would be able to get the air support they would need in action if that view [Tedder's] prevailed." Clark continued to view aircraft as auxiliary weapons, and "that they should come under the direct orders of the ground⁶⁹ commander."

Clark lost his XII ASC detachment, but Tedder still felt resistance from American generals. Despite Eisenhower's acceptance of the new doctrine of command and control, Tedder thought American ground commanders were "instinctively antagonistic to it" and found the new doctrine "difficult to understand" in that "every [ground] general has not a divine right to command his own private air forces, and incidentally a divine inspiration by which he knows better than anyone else how those air forces should⁷⁰ be employed."

As late as April, the war of words continued between American ground commanders and British and American air officers. General George S. Patton Jr., then commanding II Corps, sent three cables to the Air Officer Commanding, NATAF, on April 1 and 2, 1943. He complained bitterly to Coningham that the forward troops had been continuously bombed. "Total lack of air cover for our units has allowed German air force to operate almost at will. Enemy aircraft have bombed all division command posts and concentrated on

units supporting main effort."

Cunningham's response was swift and blunt. In a reply repeated world-wide, he pointed out that the German air activity had resulted in six casualties and did not appear to significantly hamper II Corps advance. He went on to launch a caustic attack on Patton and his headquarters.

It is to be assumed that intention was not to stampede local American Air Command into purely defensive action. It is also assumed that there was no intention to adopt discredited practice of using Air Force as an alibi for a lack of success on ground. If SITREP [Situation Report] is in earnest and balanced against...facts, it can only be assumed that II Corps personnel concerned are not battle-worthy in terms of present operations...it is requested that such inaccurate and exaggerated reports should cease.⁷²

Cunningham's response was indeed harsh. The United States Army's official history termed it a "sarcastic and supercilious rejoinder." In fact, the history considered Cunningham's new doctrine a failure by April 1, 1943, claiming that most of the air forces' successes had been "out of sight and hearing of the ground troops." It further stated that the air forces' main mission was, at this point, to win air superiority.⁷³ Tedder insisted, however, that his subordinate make amends to General Patton. Cunningham duly apologized for his harsh language but retained his position on air power.

Meanwhile, Cunningham and Kuter, drawing on the experience of the Western Desert, planned a three-phase blow: first, defeat the enemy air force, both in the air and

on the ground; second, knock the props out from under the Axis ground effort by striking depots, ports, and supply routes; and third, to join the army action.⁷⁴ Coningham stressed the doctrine of co-equal air and ground commands, each working together toward a common goal. Both he and Tedder realized the value of joint planning and of having air and ground commands each working together toward a common goal. Both he and Tedder realized the value of joint planning and of having air and ground staffs live and work together to promote harmony. He wanted to forge a centrally controlled air force that would cleanse the enemy from the skies and then enter fully the battle against the enemy's ground units.⁷⁵

Coningham's orders simply reflected his successful experience in the Western Desert Campaigns. In fact, Montgomery went so far as to predict to Eisenhower that the United States would "lose the war" if it continued to use its air power as it had at Kasserine.⁷⁶ Though that was a typical overstatement from the self-centered British general, Tedder, Coningham, Spaatz, and Kuter were tasked by senior Allied commanders with salvaging the Allied air effort by employing battle-tested British doctrine.

NOTES FOR CHAPTER III

1

Craven and Cate, vol. 2, p. 106. In November and December, 1942, the Allied air commands in the Mediterranean included the Twelfth Air Force, RAF Eastern Air Command, RAF, Middle East, RAF, Malta, and United States Middle East Air Force.

2

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3

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4

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5

Ad Hoc, p. 26.

6

Joseph P. Harahan and Richard H. Kohn, Air Superiority in World War II and Korea. Text of interviews with Generals James Ferguson, Robert M. Lee, William Momyer, and Lt Gen Elwood R. Quesada. (Washington, D.C.: Office of Air Force History, HQ, USAF, 1983), p. 36.

7

Ad Hoc, p. 26.

8

AAF in Northwest Africa, p. 31.

9

Craven and Cate, vol. 2. p.113.

10

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11

Ibid., p. 114.

12

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13
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14
Ibid., p. 138.

15
Ibid., p. 139.

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General William M. Momyer, Airpower in Three Wars,
(Washington: U.S. Government Printing Office, undated) p.
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"XII ASC in Tunisian Campaign," p. 3.

24
Ad Hoc, p. 28b.

25
"XII ASC in Tunisian Campaign," p. 4.

26
Ad Hoc, p. 28b

27
Craven and Cate, vol. 2, p. 141.

28
Ad Hoc, p. 25.

29
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30
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- 32
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- 34
Strawson, pp. 176-177.
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- 37
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- 38
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- 39
"XII ASC in Tunisian Operations," p. 5.
- 40
Harahan and Kohn, p. 31.
- 41
Craven and Cate, vol. 2, p. 157.
- 42
"XII ASC in Tunisian Operations," p. 5.
- 43
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- 44
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General Mark W. Clark, Calculated Risk, (New York: Harper and Brothers, 1950), p. 161.

68
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70
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71
Quoted in Tedder, p. 410.

72
Howe, p. 573. In fact, NATAF flew 416 sorties on the 1st and 2nd of April in support of Patton's II Corps. Axis air forces mounted 114 sorties during the same period. See NATAF Cable, quoted in Ad Hoc, p. 61.

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75
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76
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CHAPTER IV

SPRING COMBAT: THE NEW DOCTRINE VINDICATED

The British generals and air marshals arriving in Tunisia mid-February 1943 had the benefit of years of combat against Rommel's Afrika Korps. While they may have appeared somewhat overbearing to their American allies, these British officers could not forget that the experience in combined arms warfare that they had gained had been paid for with many bitter defeats at the hands of the Germans.

To say that Britain's fortunes in the North African theater had suffered reverses would be a gross understatement. Indeed, the early succession of British victories in East and North Africa were spectacular but not very surprising, given the fact that these triumphs resulted from combat with the Italian Army. With the arrival of Rommel's Afrika Korps and its air contingent, Fliegerkorps X, Britain's romp in the desert came to an ignominious halt. By the spring of 1941, the Italian Air Force, the Regia Aeronautica, had lingered long enough to be a "decided nuisance" to the British. The Luftwaffe was an altogether¹ different foe.

The RAF had been slow to this point in establishing the principles of cooperation with the army or in understanding the inter-relatedness of independent and tactical air operations. Air supremacy alone could not stop

Rommel, and a combined air/ground operational plan would be needed if the Germans were to be defeated.² The key to Allied victory in the air, both in Egypt and Tunisia, lay in the development of a sound doctrine of winning and holding air superiority while providing a system of close cooperation between the Allies and the various combat arms. The failure of the Axis to appreciate or initiate such developments³ sped their own defeat.

In the wake of repeated British failures, General Sir Claude Auchinleck, commander of the British Eighth Army, Air Marshal Tedder, Air Officer Commanding (AOC), Middle East, and Air Vice Marshal Coningham, commander of WDAF, all agreed that the basic principles of the RAF were correct but that economy of force must prevail; thus, the air forces⁴ were to be centrally controlled.

The British took several steps to refine air-ground cooperation. Number 253 Army Co-Operation Wing, part of the Western Desert Air Force, carried out joint exercises with the Army. An interservice committee studied air support principles. By September 1941, the committee accumulated sufficient experience to produce Middle East Training Pamphlet (Army and Air Force) Number 3-Direct Air Support. This pamphlet defined air support as direct if it had an immediate effect on the action of ground forces in combat. The apparatus for directing air support was the Air Support⁵ Control Headquarters.

With the full agreement of Auchinleck, Coningham decided that all control of air support should center on him

and his advanced headquarters. This headquarters would be in close and constant contact with army commanders. The Air Support Control Centers would pass messages for support and requests for action to the AOC. These requests would be passed simultaneously to the wings concerned so as to avoid any delay in acting upon Coningham's decisions. The British therefore dropped immediate ground support in favor of a more flexible combat policy that acted upon the most pressing needs as determined by joint army-air staffs.⁶

By November, 1941, Auchinleck was ready for an attack on Rommel's army. Operation CRUSADER aspired to relieve Tobruk, push the Axis out of western Libya, and destroy Rommel's forces on the border of Egypt. During the offensive, Coningham controlled all the air operations directly related to army movements. He lived and traveled with the Eighth Army commander, and together they were responsible for carrying out the plans approved by the commanders-in-chief in Cairo. This arrangement was the basis of all subsequent successful cooperation between the services.⁷

Coningham recognized, however, that air superiority might not last long. Placing all British air forces under an air officer in close touch with the army headquarters ensured proper concentration of all resources to meet the most critical need, which might well be to resume the fight for air superiority.⁸

Despite its total success, the scope of CRUSADER

exhausted the British: indeed, Rommel retreated, but he was merely sacrificing empty desert for time to rebuild his forces. By January 1942 he was on the offensive once again, retaking Benghazi and menacing Tobruk. The British attempted to stand west of Tobruk. By summer, they were in full retreat back into Egypt. During the flight to Alamein, Coningham had had landing grounds prepared in depth, ready for use at short notice. The Desert Air Force attempted to slow Rommel's advance though it was unable to stop it.⁹

Auchinleck praised the WDAF for its support during the retreat to El Alamein. The retreat, however, disrupted air-ground cooperation; Auchinleck's and Coningham's headquarters became separated in the chaos of July, 1942.¹⁰

On August 13, 1942, General Bernard L. Montgomery took command of the Eighth Army, as the British conducted a feverish search for a commander who could effectively halt Rommel. At the same time, General Harold Alexander became Commander-in-Chief in Cairo. Montgomery immediately concentrated his entire headquarters so as to be in close touch at all levels with Coningham's headquarters. This was a visible sign of Montgomery's determination to tighten and strengthen the links between the WDAF and the Eighth Army that had loosened in the disasters of the previous month.¹¹

Rommel attempted to turn the Alamein position on August 31, 1942, during the Battle of Alam Halfa. Newly strengthened, the WDAF flew more than 2500 sorties in a seventy-two-hour period against Rommel's troops. With a force of fewer than 500 aircraft, this sortied rate equalled

thirty-five aircraft airborne every hour. The British air forces attacked with such effectiveness that Field Marshal Albert Kesselring issued a special order on September 2, 1942, exhorting the Luftwaffe to protect the sorely¹² oppressed ground forces.

The Eighth Army remained on the defensive, allowing the WDAF to pound the Axis from the air. Montgomery resisted the temptation to counterattack and thus waste the forces he had been husbanding for a decisive blow in the future. Vigorous reactions by the Germans to several harassing attacks caused heavy British casualties and justified Montgomery's decision¹³ to stay put and allow the Axis force to burn itself out.

The British victory at Alam Halfa was a tremendous boost for morale. Coningham's adherence to the principles of concentration and centralization in his use of air power proved to be a highly effective tactic. The massive effort cost the WDAF sixty-eight aircraft; the smaller Axis air forces lost forty-one. Rommel had been beaten on ground of his own choosing. The battle put an end to Axis hopes of reaching the Nile. The Axis effort expended at Alam Halfa, together with the heavy losses among Axis supply convoys,¹⁴ seriously weakened their forces.

Of Alam Halfa, Rommel later wrote that the non-stop and heavy air attacks of the RAF "whose command of the air had been virtually complete, had pinned my army to the ground¹⁵ and rendered... any advance... completely impossible." The stage was now set for the final struggle at El Alamein.

The RAF plan of operations began with the winning of the air battle before the ground attack opened. Once air supremacy was established over the enemy, the whole air effort would thus be available to support the army. On October 23, 1942, the British assumed the offensive at El Alamein. The RAF began its phase of the battle four days before the opening of the ground offensive. By the time Montgomery sent his soldiers into the attack, the RAF had achieved air superiority and could direct its firepower¹⁶ against enemy ground forces.

From October 23 to November 4, 1942, the WDAF flew 10,405 sorties, 1208 on November 3 alone. American air units in Egypt added another 1181. Overwhelmed, the Axis air forces managed little more than 3000 sorties and lost eight-four aircraft, mainly fighters, while the combined Anglo-American losses amounted to ninety-seven.¹⁷

The British, under Tedder, Coningham, and Montgomery believed that air supremacy required a constant effort, not just a few days of heavy aerial combat. They based their strategy on a balance between the use of bomber and fighter forces with an emphasis on mobility and cooperation. Fighters performed offensive sweeps, while bombers struck at near- and long-range targets. Thus, even after the opening days of the aerial campaign before a ground battle, British aircraft often did not appear over the battlefield because¹⁸ the battle for air supremacy raged elsewhere. During periods of intense aerial fighting such as that before Alamein, the British were willing to accept high losses

over the short term because they were able to realize quickly their ultimate objective of air superiority. While Axis aircraft losses were lower than those of the British at Alamein, the Axis flew only one-third as many sorties. Advancing British troops found hundreds of damaged and destroyed aircraft on abandoned Axis airfields, the results¹⁹ of British air strikes.

The lessons of the Western Desert, paid for so dearly in combat, were not included in the planning for TORCH largely because of the doctrine of the American planners. Only now, after months of inconclusive and humiliating struggling in the air, did American commanders in Northwest Africa grasp the value of the lessons of the Western Desert. This acceptance came only with the arrival of the same British air and ground commanders who had forged victory from defeat in Egypt. These men were now called upon once again to repeat their previous triumphs.

Though the Kasserine battle presented the zenith of Axis fortunes in Tunisia, it also did not spell the end of offensive operations by the Germans. Encouraged by Rommel's success, General Juergen von Arnim, commanding the Fifth Panzer Army, launched operation OXHEAD. OXHEAD began on February 26, 1943, and called for a maximum effort in response by the 242 Group. This force was employed to the full,²⁰ strafing anything that moved. With this action, Coningham proved that the army would not be bereft of air support in battle despite the new emphasis on counter-air operations.

In fact, the United States' Army's official history commended the Allied effort at this point as "more effective than ever before."²¹ This effectiveness was a result of the fact that the Allied air forces responded to the ground threat as a concentrated, centrally directed force. The theory of concentration was valuable to ground support as well as to counter-air operations.

OXHEAD could not repeat the success of Kasserine. Allied resistance and the relative shortage of equipment among the Axis forces stalled the offensive which petered out by March 3. The Allies had suffered some casualties but the effort served only to weaken the Germans. By the first of March, for example, German Corps Group "Weber," positioned on the northern flank of the Axis line, had only six tanks left. In a memo to Kesselring that same day, Rommel reported that he had 350,000 Axis troops in Tunisia, two-thirds of whom were German, but only 120,000 were combat troops.²² After the failure of his last offensive against the British at Mareth, on March 9, 1943, the old Desert Fox, tired and ill, left Africa for the last time. For reasons of morale, the Germans kept Rommel's departure secret.²³ In fact, official NATAF narratives referred to "Rommel's army" through late April. Von Arnim assumed command of Army Group Africa.

The organizational changes in the Allied air forces, meanwhile, did not bring results overnight. Despite the flurry of ground activity in late February and early March, this period was a time of preparation for Allied airmen.

Units need replacement aircraft, new pilots needed training, and most of the airfields required repairs to the damage caused by the Kasserine battle. Eisenhower and his staff appreciated Spaatz's and Coningham's difficulties.

Eisenhower's chief of staff, Brigadier General Walter Bedell Smith, remarked to Tedder that he was willing to do whatever was necessary to make the new organization work. He went on to say, however, that it would not change his ideas on a postwar independent air force which would come only over his (Bedell Smith's) "dead body."²⁴

One perplexing problem remained to be resolved: the fate of the Twelfth Air Force. Spaatz had asked Eisenhower about the Twelfth, and received the answer that Headquarters, Twelfth Air Force, would continue as the administrative headquarters for the United States Army elements of the Northwest African Air Force. Spaatz thereupon took command of the Twelfth on March 1, 1943. He had no staff as such. Actually, all administrative functions were now carried out by NAAF and the misty existence of the Twelfth served mainly to mystify all but a few headquarters experts.²⁵

Coningham laid down a new operational directive on February 20, 1943. This directive reflected his philosophy of the new NATAF as well as the doctrine he developed in the Western Desert. Coningham wrote that "[t]he attainment of this object [maximum air support for ground operations] can only be achieved by fighting for and obtaining a high measure of air supremacy... . The course of action I propose to

adopt to achieve the object are: 1) A continual offensive against the enemy in the air. 2) Sustained attacks on enemy main airfields... . The enemy must be attacked wherever he²⁶ can be found, and destroyed."

Coningham used the comparative lull following OXHEAD to reorganize his forces. Additional radar equipment arrived and was built into an excellent warning system. The XII ASC's immediate problems with landing grounds were solved when II Corps secured the two fields at Thelepte; fighters²⁷ returned to them on March 12.

NATAF still desperately needed airfields and this, like effective ground or air action, could only be resolved through unified action. A meeting to address this problem convened on March 3 at NATAF headquarters. The chief engineers of AFHQ, 18th Army Group, First Army, and NAAF attended. Two days later, as a result of this meeting, NAAF issued a directive that gave NATAF thirteen forward fields to be completed by March 13. British First Army, which controlled the British aviation engineers, resisted the authority of NAAF to set airfield priorities. On April 24, 1943, AFHQ decided in favor of NAAF, ending six months of²⁸ confusion concerning airfield construction.

By the beginning of March, meanwhile, NATAF mustered²⁹ 362 aircraft in the XII ASC and 242 Group. The XII ASC now included three fighter groups and a tactical reconnaissance squadron. It was to be used in the grand offensive designed to crack the Mareth Line in southeastern Tunisia. Montgomery

planned to move against Mareth during the second half of March. The United States II Corps was to launch its own attack toward Gafsa and move against Maknassey. The First Army was tasked to draw off enemy reserves and thus keep them out of the battle. The code name for the II Corps³⁰ operation was WOP.

The XII ASC was to attack enemy airfields to divert enemy fighter reserves from the Mareth battle by forcing³¹ them to defend their own bases. With the Axis air forces thus engaged, the WDAF would be free to devote its full strength to supporting the Eighth Army. Such a plan, involving coordinated large-scale operations on the part of two national air forces, could only have been fulfilled by the centralized direction provided by NAAF and NATAF.

Cunningham's instructions to his commanders were fairly precise. He informed the commander of the XII ASC that his fighters were to be used only in offensive roles. In his "Directive for Operation WOP," Cunningham told his commanders that they were "to employ [their] fighters offensively in areas where the enemy is likely to be encountered to provide protection to the ground forces... . You are NOT to employ your fighters in a defensive role over enemy concentrations... except when enemy air attacks are³² persistent."

Both the XII ASC and the 242 Group were tasked to obtain and hold air superiority. RAF 242 Group was to be prepared to support XII ASC operations, the latter tasked to

protect the move forward by II Corps as well. The Tactical Bomber Force was directed against enemy airfields while the WDAF was tasked, from March 20 onward, to support the Eighth Army.³³

Starting with 169 operational aircraft, the XII ASC's operations in support of II Corps were tremendously successful. Between March 23 and April 3, the XII ASC lost fifteen aircraft while shooting down more than sixty enemy machines. Out of a total of 1388 sorties flown during this period, 652 were fighter sweeps. Previously, by its own admission, the XII ASC's losses had exceeded victories. Though flying much the same aircraft as before, the XII ASC was armed with a new spirit and direction and was finally able to exploit its numerical resources.³⁴

Under the weight of the Allied attack, the Axis began withdrawing from their major airfields. Mezzouna and Gabes went first; with the abandonment of Tebaga, with twenty-eight demolished aircraft left on the field, the Luftwaffe retired to Sfax and La Fauconnerie.³⁵ The latter field contained the bulk of the German fighter strength, and the Allied air forces subjected it to a tremendous pounding by aircraft of all types. On April 7, the Germans evacuated that field as well. This was the last occasion on which the Axis seriously contested the supremacy of Allied air power in Tunisia.³⁶

By March 22, 1943, every airfield in enemy hands in southern Tunisia was hit by Allied aircraft on the average of every fifteen minutes. As a result, no more than five

Axis aircraft appeared over the Eighth Army during the opening phases of the Mareth battle. On the 3rd of April, Spitfires of the American 52nd Group caught twenty Stukas and their escort of fourteen fighters on a return flight. While losing one Spitfire, the Americans shot down fourteen of the Stukas. Shortly thereafter, the Germans withdrew their Stukas from Tunisia. The XII ASC had finally settled³⁷ an old score.

The XII ASC reached its peak effort during the week of April 4-10, flying 1934 sorties, 540 of which were fighter sweeps. The loss ratio was not as good as the previous weeks but was still favorable: thirty enemy aircraft destroyed while American losses amounted to twenty-two. From March 21 through the end of April, XII ASC shot³⁸ down 118 enemy aircraft while losing fifty-three of its own. This was a significant difference from the dreary days of February.

As the Axis forces fell back toward Enfidaville, their bridgehead was now so constricted that they could not escape constant aerial attack. All available aircraft of both the WDAF and the XII ASC attacked the enemy columns³⁹ retreating along the coast. The Axis still maintained large and potentially dangerous air forces in Tunisia but with the ground situation deteriorating, they had lost many bases and were tied down trying to help the ground forces stem the Allied onslaught. The Axis mounted feverish attempts to keep their armies supplied and thus delay the inevitable. The moment was now ripe to deal with the Axis

transport fleet a final blow.

Throughout the North African campaign the effect of Allied air power against Axis naval convoys was of decisive importance if the Axis armies in Tunisia were to be prevented from building up large stocks of supplies. Of the 119 convoys that left Italy between December 1942 and May 1943, sixty-four submarine attacks sank thirty-four ships while 164 air attacks sank seventy-one. In March and April, cargo losses rose to forty-one percent while in the first few days of May, that loss rate soared to seventy-seven percent. Of 243 Axis cargo ships lost and 242 ships damaged, sixty-seven percent of these were victims of Allied air attacks. During this same period, Tunisian ports suffered 273 air raids.⁴⁰ According to Italian sources, the Axis convoy routes were under the "absolute domination of the enemy air forces, who ruled these [convoy routes] with an incredible abundance of planes... . Even the smallest craft were sighted and attacked."⁴¹ As we have seen, the Axis still managed to build up an impressive force in Africa. In the absence of these Allied air and naval attacks against their naval convoys, one can only guess at what the Axis forces could have achieved. Certainly, the campaign against Axis shipping did a great deal to lighten the burden of those troops facing Axis forces in the field.

With their sea lanes thus choked off, the Axis command resorted to aerial resupply efforts once again. By mid-March, Axis air transports, operating mainly from the

Naples and Palermo areas in Italy, were flying more than 100⁴² sorties a day, rising to 150 in early April.

With such lucrative targets at hand, the Allied command resurrected FLAX, a plan that had been shelved in mid-February. During the earlier period, the Allies had neither the bases nor the organization required to effectively interfere with Axis aerial resupply efforts. The time was now right for FLAX.

FLAX called for simultaneous attacks on transport landing grounds in Sicily, Italy, and North Africa. Fighter sweeps by P-38s would intercept aircraft not caught on the ground in Italy. Spitfires and P-40s would await any⁴³ aircraft that got through to Africa. The overall purpose of FLAX was simple; it intended to "intercept and destroy in the air and on the ground concentrations of the enemy air transports and their escorts which are bringing personnel⁴⁴ and supplies to Tunisia." Once again, the value of a centralized air command would be realized by the Allied commanders in Africa. Using heavy and medium bombers to attack Italian fields as well as fighters to shoot down any airborne transports, this ambitious plan required central direction and planning. In this way, by engaging enemy fighter escorts in combat and shooting down transport aircraft, the Allied air forces could forward their objectives of holding air superiority while aiding the ground forces in an indirect manner.

FLAX opened on the fifth of April and brought immediate and gratifying results. Twenty-six P-38s

intercepted a mixed formation of fifty to seventy JU-52s. twenty ME-109s, six JU-87s, four FW-190s, and a FW-189 reconnaissance aircraft. In the ensuing battle, northeast of the Cap Bon peninsula, eleven JU-52s, two ME-109s, two JU-87s, and the FW-189 were shot down. The attackers lost two ⁴⁵ P-38s.

The airfields of Sicily were also hammered from the air. American B-17s and B-25s wreaked such havoc that the entire Axis shuttle service was disrupted. Reconnaissance photos, together with aerial combat claims, led NAAF analysts to conclude that 201 Axis aircraft had been destroyed, all but forty on the ground, while the Allies lost only nine bombers. Immediately following the raids, the ⁴⁶ Germans could muster only twenty-nine flyable JU-52s.

The tri-motored Junkers JU-52 transport formed the backbone of the Luftwaffe's cargo fleet. It flew first in 1931 as a civilian airliner. The first military version, a bomber, appeared in 1934. With the advent of more modern bombing aircraft, the JU-52 remained in production as a transport. In this role, it performed on all fronts throughout the war. By 1945, despite the age of the aircraft's design, German designers had made virtually no changes in its configuration. Nicknamed by the Germans "Auntie Ju," the JU-52 was a sturdy, well-designed aircraft. It was capable of carrying eighteen fully equipped soldiers or twelve stretchers. In terms of cargo, the JU-52, on short flights, could carry more than two tons. "Auntie Ju," like

most transports, was a vulnerable aircraft. With a top speed of only 190 miles per hour, the aircraft was defended by three 7.92mm machine guns. The JU-52 was a tough and reliable aircraft, however, and versions of it were on⁴⁷ active duty with the Spanish Air Force as late as 1975.

By the middle of April, losses among the JU-52 force were so serious that the Luftwaffe began scouring other theaters for additional assets. Among the aircraft transferred to the theater were giant, six-engine ME-323 transports. Designed originally a gliders, these lumbering beasts could carry more than twenty tons of cargo or an entire company of infantry. Capable of a top speed of only 177 miles per hour, the ME-323 carried five 7.92mm machine guns in the nose, with fittings for six infantry machine guns in beam windows. The nose opened so that objects as large as motor transports, light tanks, or artillery pieces⁴⁸ could be carried. In this desperate hour, the Luftwaffe decided to commit these aircraft.

With the decimated Axis forces now in the Enfidaville position, Axis air transport increased as the transport units' losses were replaced. Because of a growing shortage of fighters caused by heavy losses in combat, the Axis command concentrated its aerial convoys into two large⁴⁹ daily flights.

By April 16, WDAF was located on forward landing grounds north of Sousse and was now able to patrol over the bay of Tunis. Operating seaward-looking radar, the entire fighter force of the WDAF was advantageously placed to

intercept both sea and air transport. Late on the afternoon of April 18, 1943, in what became known as the Palm Sunday Massacre, the fighters of the WDAF, operating under Coningham's direction, broke the back of the Axis transport force.⁵⁰

On the afternoon of the 18th, the Germans successfully ran a large aerial convoy into Tunisia. On its return flight, flying at sea level with ample fighter escort above, the convoy was attacked by four P-40 squadrons with a top cover of Spitfires. The battle was the dream of every fighter pilot. Lumbering along in V-formation just a few hundred feet above the sea's surface, the JU-52s were slaughtered. Contemporary estimates varied, but a least fifty and possibly as many as seventy, JU-52s out of a force of approximately 100 were shot down. The attackers also claimed sixteen MC-202s, ME-109s, and ME-110s from the escorting fighter force. Allied losses were six P-40s and one Spitfire. This success was crowned the next day when Allied fighters shot down twelve aircraft out of mixed⁵¹ Italo-German force of transports.

Despite these losses, the enemy pressed forward. Supplies brought in by sea were not nearly sufficient to sustain the Axis forces. The Germans threw in their big ME-323s, fully aware that if caught by Allied fighters, these aircraft had very little chance of survival.

On April 22, the ME-323s met the fate of their smaller brethren. Two and one half Spitfire squadrons and

four South African P-40 squadrons swarmed over a convoy of the huge transports. All the ME-323s were shot down, twenty-one in all, together with ten of the escorting fighters. The attackers lost four P-40s.⁵² As a result of this concentrated effort on the part of the Allies, the Germans were forced to halt daylight transport operations and resorted to running small flights of aircraft across at night. At the same time, the Luftwaffe command, anticipating collapse, began withdrawing its combat aircraft from Tunisia.⁵³

Operation FLAX reduced the Axis bridgehead in Africa to a virtual state of siege. Allied bombers pounded African, Sicilian, and Italian ports while the transports of the Axis air forces trickled through at night. From April 5 to the 22nd, Operation FLAX accounted for 341 aircraft destroyed, of which 260 were Axis transports: 232 JU-52s, twenty-one ME-323s, two Italian SM-79s, and five Italian SM-82s. Another eighteen Axis aircraft were claimed as probably destroyed and an additional fifty-four were claimed as damaged. Total Allied losses amounted to thirty-five fighters, virtually all of them victims of Axis interceptors.⁵⁴

With the Axis armies starved of supplies, the plans for VULCAN, the final drive to clear Tunisia, were laid down by the Allied command. The British Fifth Corps was to assault Tunis while the United States II Corps, now under Lieutenant General Omar N. Bradley and in a new position in the north, was to drive on Bizerta. In conjunction with these

assaults, Eighth Army was to attack so as to draw off Axis reserves from the main lines of advance. The assault was⁵⁵ scheduled to start on April 22, 1943.

Coringham drew up the NATAF "Operational Plan for the Final Assault on Tunisia." Stated simply, his goals were the total neutralization of the Axis air forces, which included continuous raids on their bases; interdiction of enemy supply routes; strikes in the battle area; and prevention of a "Dunkirk" style evacuation by the Axis. For this last objective, the Royal Navy, NATAF, Northwest African Strategic Air Force (NASAF), RAF Malta, and the United States IX Bomber Command in Libya would combine⁵⁶ forces to ensure that no Axis forces got away.

Because of the contracted battle zone, the area was neither sufficiently large for three fighter zones nor small for one. Thus, XII ASC passed under the operational control of 242 Group, leaving WDAF in operational control of the other half of the front. With the movement of the II Corps to the extreme northern sector of the front, XII ASC now⁵⁷ covered British and French units.

The Axis air forces, if ignored, were still capable of presenting a serious threat to the Allied advance. In Tunisia, the Axis possessed 260 fighters and a total air strength of 335 aircraft. Coringham warned his commanders⁵⁸ not to take this threat lightly.

NATAF opened its part of VULCAN on April 18, 1943, four days before the ground assault. The heavy bombers of

NASAF joined NATAF in pounding Axis airfields. Even though the Allies' losses were light, they were unable to inflict heavy losses on the enemy. Anticipating the punishing air assault, the Axis air forces had widely dispersed their forces so as to limit the material effects of the bombings. West of Tunis alone, the Germans were using twenty-five landing grounds. German and Italian aircraft were rarely found in the same place two days in a row. This degree of mobility and dispersion doubtless saved the Axis air forces from annihilation. The strain, however, of maintaining such a posture severely limited the use of this Axis force. In an indirect manner, therefore, Coningham's forces had realized⁵⁹ their goal of neutralizing the enemy.

Persuaded that its aircraft in Tunisia were fast becoming a wasted asset, the Luftwaffe began withdrawing the last of its units to Sicily. Not all Axis units left immediately, though, and there were still approximately 200⁶⁰ Axis fighters in Tunisia in the first week of May, 1943.

Despite this considerable numerical strength, the Axis air forces could do little to affect the course of the ground battle. By April 22, Allied air superiority was complete. Except for a few isolated instances when they conducted operations with Sicilian-based aircraft, the German and Italian air forces ceased to play any serious role in the battle. Axis fighter opposition was so light that increasing numbers of Allied fighters flew offensive missions of one sort or another since they were no longer needed as escorts. As Coningham had said repeatedly, once

in possession of air superiority the full weight of the Allied air forces could be thrown into the ground battle.
⁶¹
 That moment had arrived.

The weakness of the Axis air forces was underscored by the increasing number of strafing and fighter-bomber sorties flown by Allied aircraft. For the week of April 23-
⁶²
 29, for example, XII ASC flew 502 fighter-bomber sorties. Fighter sweeps continued as well, though the enemy was clearly avoiding combat. Fighting on the 21st and 23rd of
⁶³
 April cost the Axis twelve fighters; the Allies lost two. Totals for the month of April were impressive. Enemy losses of all types of aircraft stood at 520, with 106 "probables," and 249 damaged. Allied losses amounted to ninety-five, of which twenty-seven were bombers, plus another eight missing
⁶⁴
 and presumed lost, and 214 damaged.

The final assault on the Axis in Tunisia opened on May 6 at 0300 hours. The Allied air forces laid on a tremendous attack. At first light, NATAF aircraft put down a "creeping barrage" in front of the advancing Allied troops. More than 2000 NATAF sorties struck an area only four miles
⁶⁵
 long and three and a half miles wide.

The sixth of May was the last occasion on which enemy air force units appeared in any strength. Within three hours, Allied fighters shot down twenty German fighters, of which the XII ASC claimed eleven. That day, the Allies lost
⁶⁶
 only two fighters.

On May 8, 1943, the Axis had only two landing fields

left in Tunisia, both on the Cap Bon peninsula. The Axis air units managed a few dozen sorties on the 8th and 9th but flew none thereafter. Major General Karl Koechy, commanding the Tunisian Luftgau, decided to evacuate; on the 7th, he authorized unit and airdrome commanders to flee at their discretion. He, four other Luftwaffe generals, and between eight and ten thousand Luftwaffe personnel, largely ground personnel, marched into captivity over the next few days. As the Allies advanced, they found more than 600 Axis aircraft in various states of serviceability left behind on the airfields. The Luftwaffe had generally succeeded, however, in removing both serviceable aircraft and air crews.⁶⁷

Axis defenses crumbled under the Allied assault. Both Tunis and Bizerta fell on May 7, 1943. Axis forces pressed back to the coast, but escape was impossible. No "Dunkirk" was even attempted. Though still possessing more than 800 aircraft in the theater, the Luftwaffe could not muster the strength to cover such an evacuation even if the Italian navy had wished to attempt one. Allied aircraft and warships patrolled off the Cap Bon peninsula with impunity. The Axis forces had only two choices: surrender or die fighting.⁶⁸

The last remnants of the Afrika Korps surrendered on the 11th of May. Von Arnim was captured the next day. The Italian General Giovanni Messe, one-time commander of the ill-starred Italian Eighth Army that had been smashed by Soviet forces in January, 1943, held out for another twenty-four hours. Messe's capitulation brought all organized Axis

resistance to an end on May 13, 1943. A total of 275,000 Axis troops marched into Allied prisoner-of-war camps. In all, from 1940 to Messe's surrender, more than one million Axis soldiers had been lost in Africa. In the final days of⁶⁹ the campaign, a few more than 1000 escaped to Italy.

From its rather inauspicious debut, the Allied air force in Northwest Africa was able to make an important contribution to the Allied effort in that theater. While action in this region gave United States ground and air commanders important experience in coordinated air/ground planning and operations, the same action proved a serious drain on German air strength. The Allies in general, and the Americans in particular, would make use of this experience in the great battles of Europe. The Germans would soon experience the same kind of bitter defeat they had inflicted upon their enemies in 1939-41. The experience gained by the American air forces in Northwest Africa helped to make those German defeats possible, not just in Tunisia, but in Italy and France as well.

NOTES FOR CHAPTER IV

¹
Playfair, p. 272.

²
Overy, p. 65

³
Ibid., p. 67.

⁴
Playfair, p. 287.

⁵
Ibid., p. 295.

⁶
Overy, p. 67.

⁷
Playfair, p. 98.

⁸
Ibid., p. 99.

⁹
Ibid., p. 282.

¹⁰
Ibid., p. 336.

¹¹
Ibid., p. 370.

¹²
Ibid., p. 389-390.

¹³
Terraine, p. 383.

¹⁴
Playfair, p. 391.

15
Field Marshal Erwin Rommel quoted in "The Battle of Alam Halfa," History of the Second World War, Part 39, p. 1068.

16
Terraine, p. 384.

17
Ibid., p. 384-385.

18
Overy, p. 67.

19
Terraine, p. 380.

20
Headquarters, Northwest African Tactical Air Force, "Narrative Report of Operations, Lessons Learned, February-May, 1943," AFHRC 614.430-2, Maxwell AFB, Ala., p. 17.

21
Howe, p. 509.

22
Ibid., p. 510.

23
Ibid., p. 516.

24
Tedder, p. 405.

25
Craven and Cate, vol. 2, p. 167.

26
General Operational Directive appended to Kuter, "Lessons in Air Force Organization," Appendix One.

27
Craven and Cate, vol. 2, p. 170.

28
Ibid., p. 252.

29
AAF in Northwest Africa, p. 45.

30
Headquarters, Northwest African Tactical Air Force, "Directive for Operation WOP," 8 March, 1943, AFHRC 655.430-6, Maxwell AFB, Ala., p. 1.

31
Headquarters, XII Air Support Command, "Control of Operations," message to General James H. Doolittle from HQ, XII ASC, 5 March, 1943, AFHRC 612. 4501, Maxwell AFB, Ala.

32
"Directive for Operation WOP," p. 1.

33
NATAF, "Narrative Report," p. 20.

34
XII ASC in Tunisian Operations," p. 11.

35
Craven and Cate, p. 176.

36
NATAF, "Narrative Report," p. 22.

37
Ibid., p. 23.

38
"XII ASC in Tunisian Operations," p. 11.

39
Bragadin, pp. 248-249.

41
Ibid., p. 243.

42
NATAF, "Narrative Report," p. 29.

43
Ibid., p. 30.

44
Headquarters, Northwest African Strategic Air force, "FLAX Operations Review," 22 March, 1943. AFHRC 652.311, Maxwell AFB, Ala.

45
Craven and Cate, vol. 2, p. 189.

46
Ibid., p. 190.

47
Bill Gunston and Tony Wood, Hitler's Luftwaffe, (New York: Crescent Books, 1978), p. 202.

48

Ibid. pp. 238-239.

49

NATAF, "Narrative Report," p. 30.

50

Ibid.

51

Ibid.

52

Craven and Cate, vol. 2, p. 191.

53

General of the Army Dwight D. Eisenhower's Report to the Combined Chiefs of Staff on Operations in the Mediterranean Area, 1942-1944, excerpt cited in Ad Hoc, p. 56.

54

Headquarters, Northwest African Air Force, "Operations Bulletin Number One for Period Ending 30 April, 1943," AFHRC 168.7043-2.

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56

Headquarters, Northwest African Tactical Air Force, "Tactical Operations Plans in Battle of Tunisia," AFHRC 613.802-614.321, Maxwell AFB, Ala.

57

Craven and Cate, vol. 2, p. 200.

58

Ad Hoc, p. 64.

59

Ibid., p. 65.

60

Tantum and Hoffschmidt, p. 284.

61

Ad Hoc, p. 65.

62

"XII ASC Operations in Tunisia," p. 18.

- 63
Craven and Cate, vol. 2, p. 202.
- 64
NAAF Ops. Bulletin, Number One, pp. 3-4.
- 65
NATAF, "Narrative Report," p. 31.
- 66
Ad Hoc, p. 66.
- 67
Craven and Cate, vol. 2, 202.
- 68
Tantum and Hoffschmidt, p. 254.
- 69
Moorehead, African Trilogy, p. 579.

CONCLUSION

The War Department's long-standing philosophy about the employment of air power in support of ground forces had been put to the test in North Africa and found wanting. The complete lack of an official American tactical doctrine led to a blind acceptance of the doctrine employed by the Luftwaffe.¹ Smashing victories over weak enemies, including the Soviet Union in 1941, seemed to prove the basic soundness of German air doctrine as it related to blitzkrieg warfare. Both the Soviets after 1941-42 and the British in 1940 proved the doctrine inadequate when it came to a prolonged war against determined, well-equipped enemies. Since the Allies were facing just such an enemy in the Axis in North Africa, they could ill afford to repeat the mistakes of the Germans.

In all fairness, American planners and generals, if stubborn, may not have been as shortsighted as otherwise portrayed. By the time planning for TORCH was under way in earnest, in mid-1942, the Germans had suffered only one real failure, the Battle of Britain. Allied and German leaders alike explained that Germany's defeat in that battle had resulted from a lack of heavy strategic bombers.

Throughout the interwar years, however, American planners failed to study in depth the problems of coordinated air/ground operations. Manuals on the subject restricted their comments to general remarks about the air

arm supporting the ground arm but, as we have seen, when the Army Air Forces established Air Support Commands shortly before America's entry in the war, no one was really certain how this new command was supposed to function. The Army and its air arm had practically no experience in combined arms operations. The first large-scale maneuvers since the Great War involving air ground operations, the Louisiana and Carolina maneuvers, had taken place after the war in Europe was well underway. Thus, the manual with which the Army Air Forces went to war, FM 31-35, offered little toward the solution of practical problems of efficient tactical air operations.

Once in Tunisia, might a shift in doctrine on either side have made a measurable difference in the fighting? We have already seen the difference a shift in the Americans' doctrine accomplished. Could a change in the tactics and doctrine of the Germans have prolonged the fighting in Tunisia? If such a change had mirrored that of the Allies, one must answer in the affirmative. The Germans had been able to hold their own on the ground in Tunisia for the first four months of the campaign. Had they and the Italians formed a genuinely binational air command structure and concentrated on halting the flow of Allied supplies, the Axis air forces might have delayed the day on which Eisenhower and his commanders felt their forces sufficiently strong to assume the offensive. From their bases in Sicily, the Axis mustered several hundred bombers and divebombers that could have formed a powerful striking force against

Allied ports, shipping, and transport routes. After the first few weeks of the campaign, the Axis began to turn the attention of their air forces more and more toward the battlefield itself.

This is not to say that the Axis air forces did not attack Allied targets with great vigor early in the campaign. As time passed, however, the effectiveness of these attacks diminished as the German and Italian air forces devoted more and more of their resources to direct battlefield support.

What of the Americans? A sound doctrine from the outset still would have suffered from logistical problems described in this paper. A shortage of airfields, a poor supply system, a large number of inferior aircraft such as the P-39 and P-40, and inexperienced crews were all serious limiting factors. Still, it is precisely in this type of disadvantageous situation that the proper use of existing resources might have compensated for these defects or, at the very least limited losses sustained in combat. The standard rules of warfare concerning concentration, economy of force, and unity of command were all violated by the American command structure as it existed. The Allied air forces were numerically a very large force. Used intelligently to strike at the enemy's weakest points, the Allied air forces could have played a greater role than they actually did by the time sufficient forces were assembled for the land battles of January and February.

Had the American air forces continued to operate in

"penny packets" without any central direction, then, as the losses from the early months quite clearly indicated, both the American and allied air and ground forces would have absorbed higher losses than those actually incurred. With relatively greater freedom, Axis fighters would have been able to spend less time defending their own bases or aerial convoys and have greater forces at their disposal to strike at Allied bombers or ground forces. Had NATAF and NASAF not smothered the Axis transport system in a massive combined and centrally directed effort, the ground forces would have faced a far better equipped Axis defense.

The duty of any commander in combat, in the Western world at least, is to meet his objectives as quickly as possible with as few casualties as possible. The fragmented air command structure and the air doctrine employed in the early portion of the campaign did not make such a situation feasible for American commanders. Certainly, the Allied forces in Africa would have eventually overwhelmed the Axis by, if anything, sheer weight of numbers. While steamroller tactics may be permissible for a Soviet commander defending Moscow, General Eisenhower would have been hard-pressed to explain lengthy casualty lists and delays in his advance over a piece of distant African real estate. The relatively simple solutions of Coningham, joint army-air planning, combined headquarters, and central direction of air forces, certainly cut losses among Allied air crews and by throwing the Axis air forces on the defensive, brought the ground forces a greater measure of protection from air attack than

the old system of simply waiting for the enemy to appear overhead.

Could the dramatic reversal in air combat have been coincidence instead of doctrine? One could say that better aircraft, better airfields, and more experienced pilots turned the tide. While these are important factors, that argument does not stand up under close scrutiny. American pilots were flying essentially the same aircraft types in March and April as they were in mid-February. Granted, as time progressed, more Spitfires and P-38s became available. Unfortunately, the standard American fighter facing the Luftwaffe remained the P-40. The airfield situation was not resolved completely until the advent of better spring weather and construction of new fields. As for experience, the American pilots in particular certainly gained a great deal. This does not, however, explain how the same crews who were being thrashed by the Luftwaffe in February were able to turn the tables on their enemy less than one month later. One must remember also, that Coningham eliminated the feeding of pilot and aircraft replacements piecemeal into battle, thus allowing more time for training new crews.

The growing strength of the Allied air forces in the theater, while important as well, does not, on its own, provide one with a sound alternative answer. As Churchill's remarks to Portal pointed out, the arrival of hundreds of Allied aircraft failed to turn the tide. By dividing their forces into smaller units virtually independent of each other, the Allies took an overall numerical superiority in

the theater and turned it into local and tactical numerical inferiority as the Germans shifted their forces up and down the front only to be opposed by whatever opposition the "local" Allied air force could muster.

Neither American nor British airmen were asking to wage a separate war. The key to Coningham's system was joint army-air planning. He wrote to Spaatz that "[i]t is only an independent air commander who can assess the value [of air support] in relation to the air resources available and the object to be attained by the land forces."² Coningham desired that the men who were experts in their knowledge of the air weapon direct the air effort. None of the air commanders aspired to direct the ground action nor did they espouse theories that would have left the ground forces without air support. In the early months of the campaign, though, airmen were being held responsible for the failure of a tactical air effort over which they had little operational control. They were not "co-equal" but subordinate. Men who understood neither the capabilities nor the limitations of aircraft types were determining their use. The destruction of an entire squadron of RAF light bombers is testimony of the weakness of such a system.

As the outnumbered RAF proved in the Battle of Britain, an offensive spirit can decisively affect the outcome of battle. This was another facet of the reorganization of February 1943. While in the last week of January, for example, the "kill" ratio stood in the Germans' favor at three-to-one, the XII ASC flew no fighter sweeps.

The week before Kasserine, the XII ASC claimed two enemy fighters while losing three. In that week as well, no³ fighter sweeps took place. Then, in March and April, NATAF flew four times more fighter sweeps than in December and January. The ratio of "kills" shifted from a two-to-one ratio in favor of the Germans to a two-and-a-half-to-one⁴ ratio that favored the Allies. That these results are the product of mere coincidence is highly improbable.

The importance of the British in this change in attitudes and doctrine in the United States Army Air Forces is obvious. Even British army commanders, such as Alexander and Montgomery, added their influence to the work of the British air marshals in the airmen's struggle to be "co-equal." Montgomery believed that "[if] air support is essential to success, he [a ground commander] may have to⁵ wait."

There were those in the American air arm who resented the British role in shaping American doctrine. One "old-line" Air Corps officer, Brigadier General Robert C. Candee, was upset that the United States had "swallowed hook, line, and sinker" what he considered an "RAF solution⁶ to a local problem in Africa.

The efforts of American airmen such as Spaatz, Kuter, and Doolittle should not be ignored. These men, together with hundreds of lesser known air officers ensured the development of doctrines that once given an opportunity by their superiors to employ them, were to prove extremely effective.

Was it a local problem that Coningham had solved? Lieutenant General George S. Patton, Jr., early critic of Coningham's doctrine and organizational theories, lavished praise on the XIX Tactical Air Group for its cooperation with his Third Army as it swept across France in late 1944. He stated that the superior efficiency and cooperation of this force was the "best example of the combined use of air and ground troops" he had ever witnessed.⁷ The XIX Tactical Air Group, by that time, fought in an environment of total air superiority; this superiority had been gained by the Allied air forces only after months of concentrated effort. As Patton's men rolled up the Wehrmacht, they received support through the same system pioneered by Coningham in Egypt and perfected by him, Kuter, and others in Tunisia. In fact, long before Patton made these comments, the results of the air campaign in Tunisia were so decisive that the War Department completely shifted its stance on tactical air power.

On June 9, 1943, the War Department approved a board to revise air doctrine in light of the North African experience. The result was Field Manual 100-20, Command and Employment of Air Power, published on July 21, 1943, in the midst of the Sicilian campaign. Some in the Army ground forces viewed the manual with dismay, and described it as the "Army Air Forces' 'Declaration of Independence.'⁸" This new manual stated that land power and air power were co-equal. The War Department recognized the inherent flexibility of air power and that the fight for air superiority and the

provision of air/ground support were not mutually exclusive. The results of combat were difficult to dispute. FM 100-20 was the War Department's recognition of the past misuse of air power and an attempt to ensure that such misuse was never repeated.

NOTES FOR CONCLUSION

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Simpson, p. 14.

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